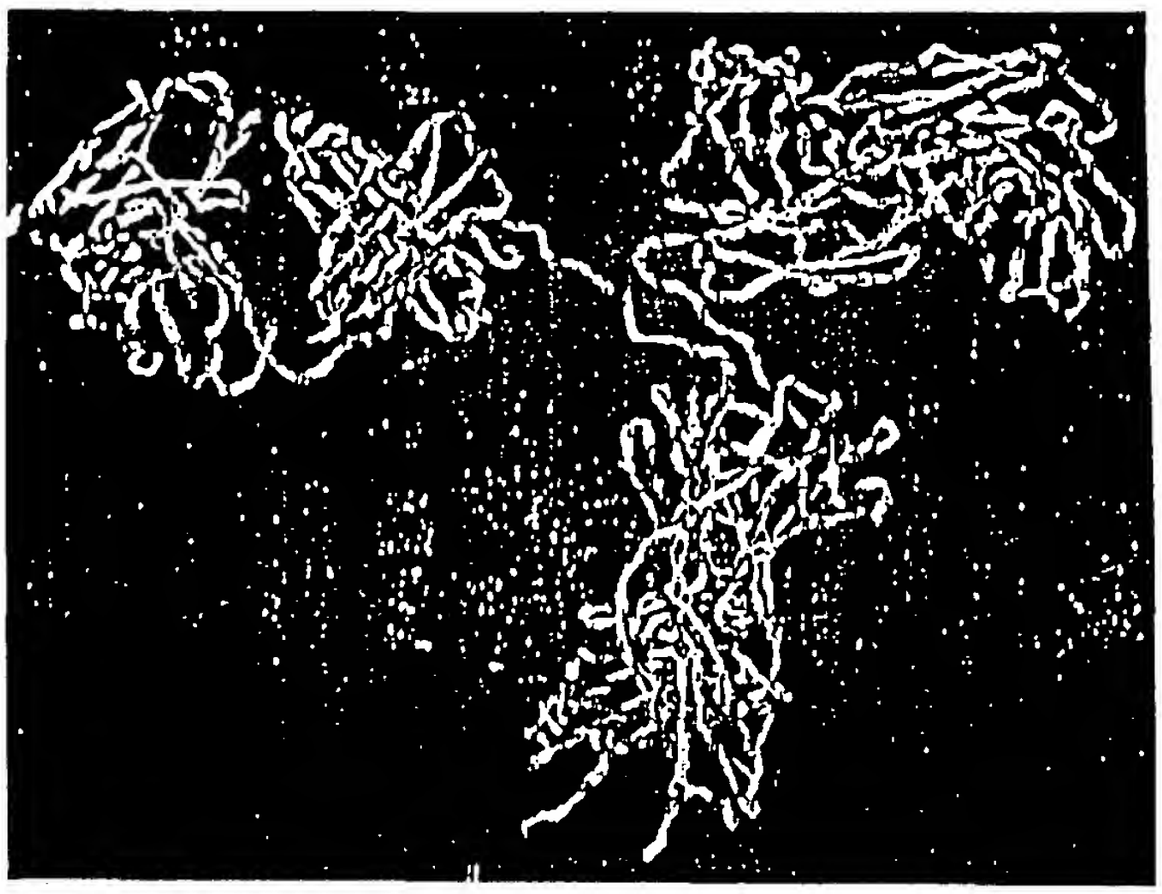

Fig. 1

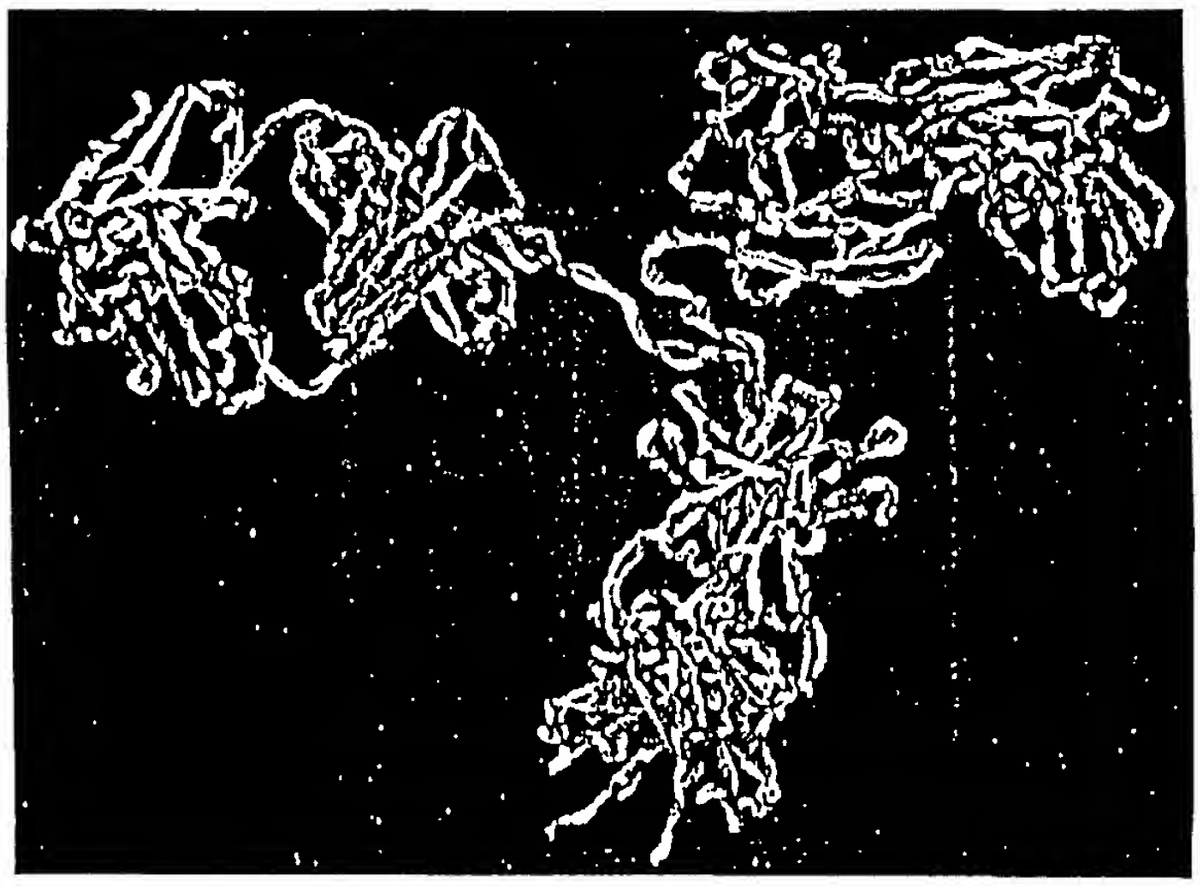

Fig. 2

K2 FRAGMENT:

*Xma*I MODIFIED *Xma*I

5' CCGGGC AGA AGG GCA AGT CTG CAT AGA AGG GCA AGT ATG AAG GCA 3'

3' CG TCT TCC CGT TCA GAC GTA TCT TCC GCT TCA TAC TTC CGTGGCC 5'

Arg Arg Ala Ser Leu His Arg Arg Ala Ser Met Lys Ala

Fig. 3

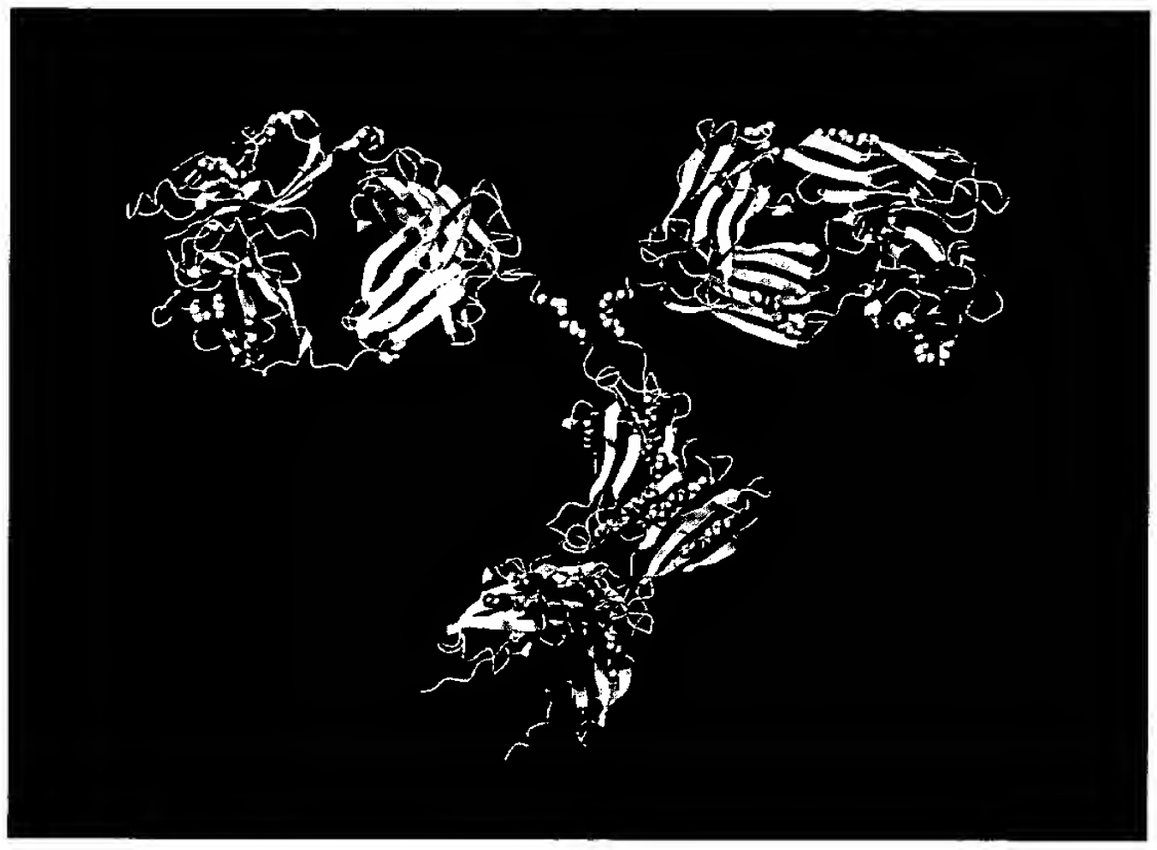

Fig. 4

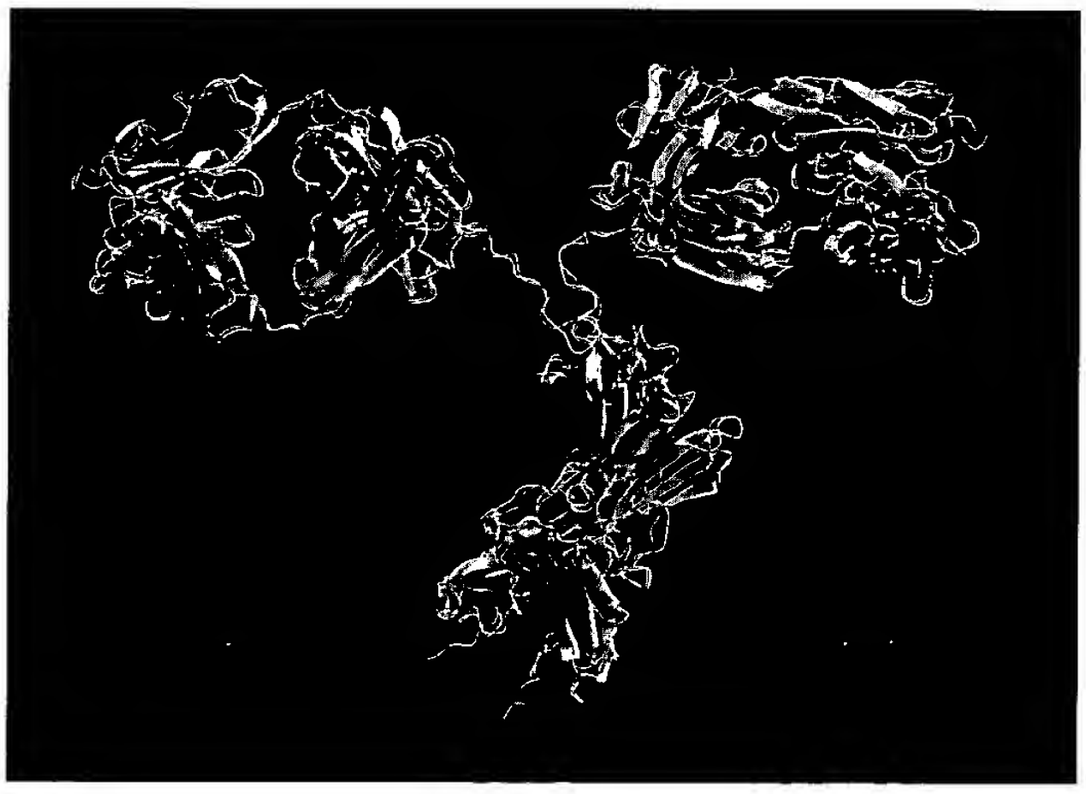

Fig. 5

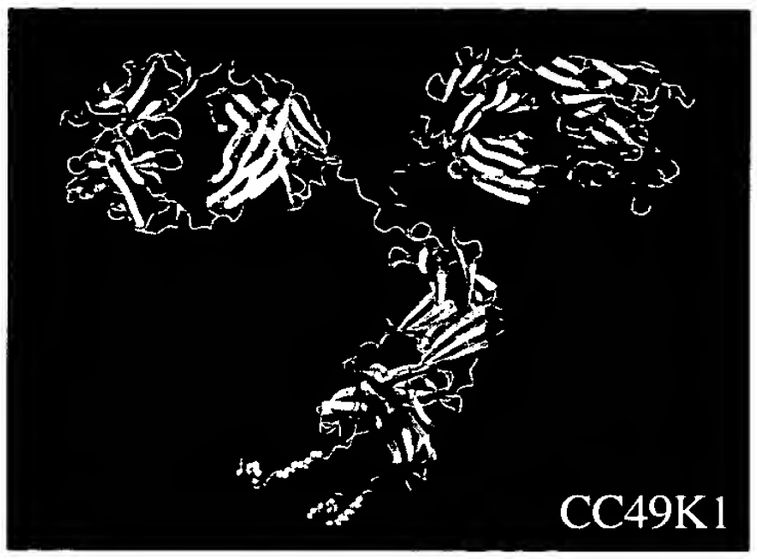

Fig. 6A

Fig. 6B

Fig. 6C

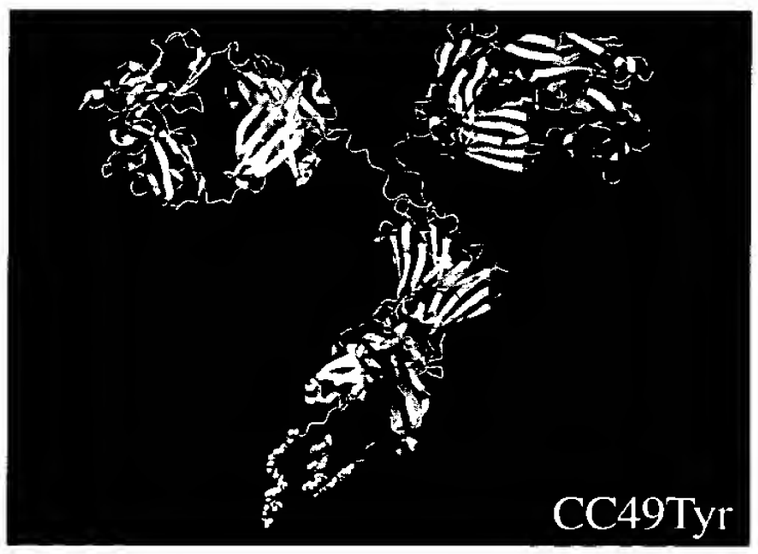

Fig. 6D

Fig. 7A

Fig. 7B

Fig. 7C

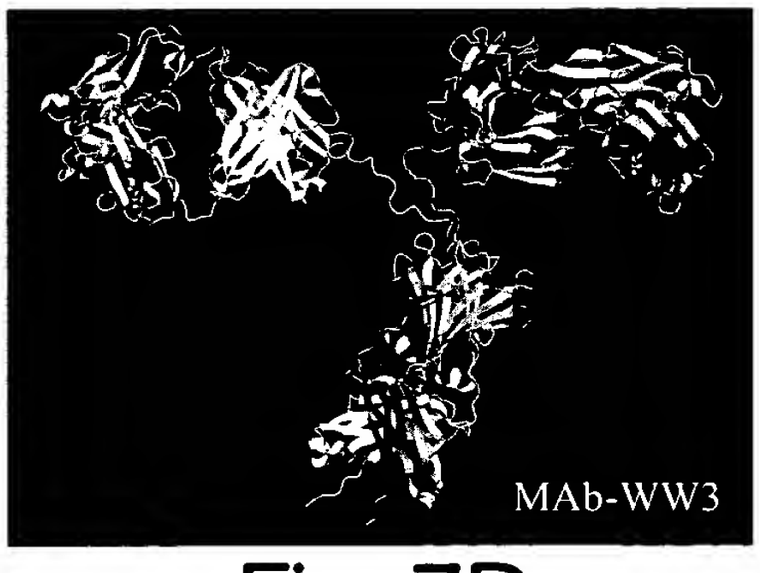

Fig. 7D

Fig. 7E

Fig. 7F

Fig. 7G

Fig. 7H

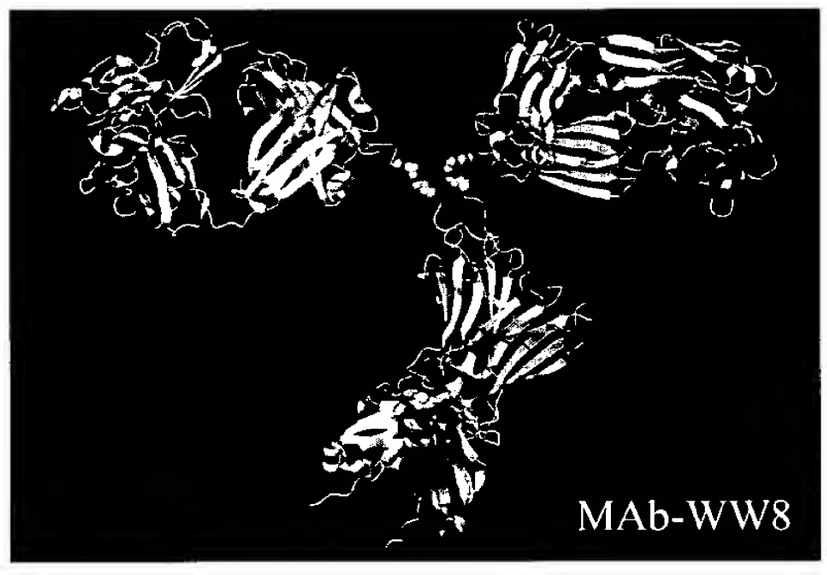

Fig. 7I

Fig. 8A

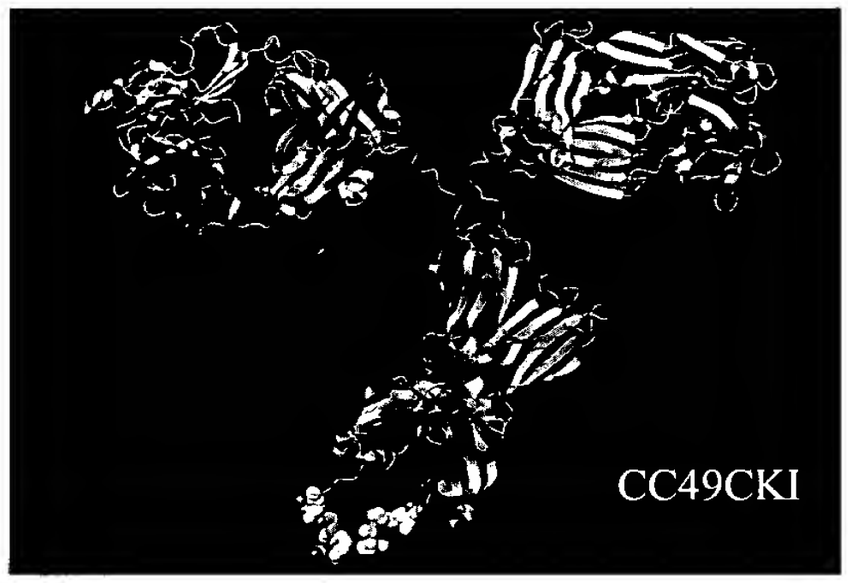

Fig. 8B

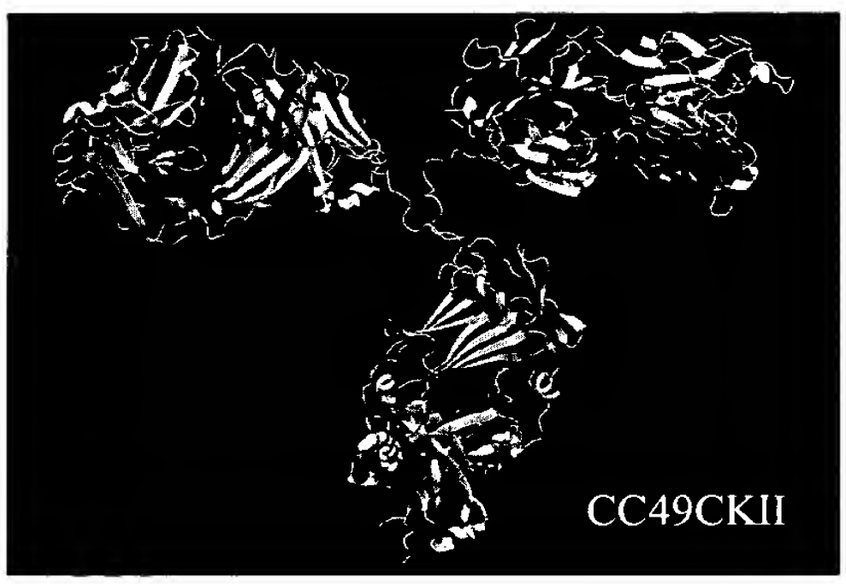

Fig. 8C

Fig. 8D

Fig. 9A

Fig. 9B

Fig. 9C

Fig. 9D

Fig. 9E

Fig. 9F

Fig. 9G

Fig. 9H

Atty.: William G. Gosz

Fig. 9I

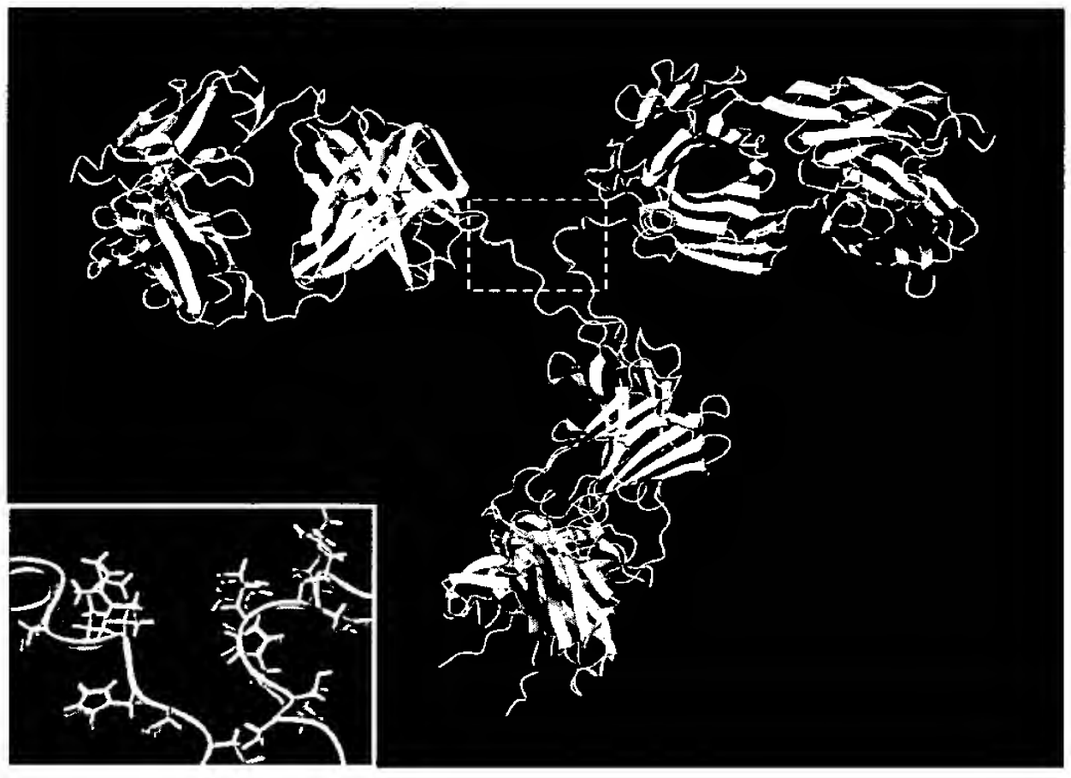

Fig. 10

Fig. 11

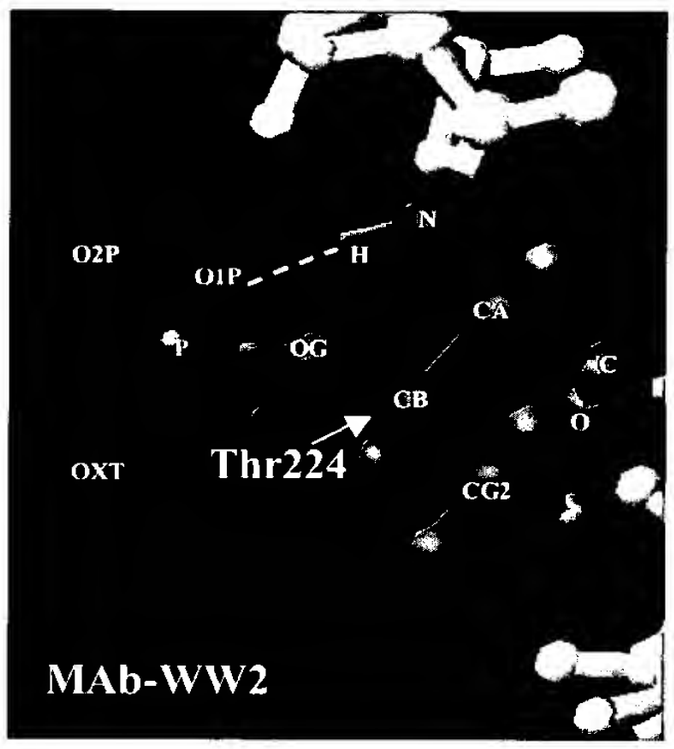

Fig. 12A

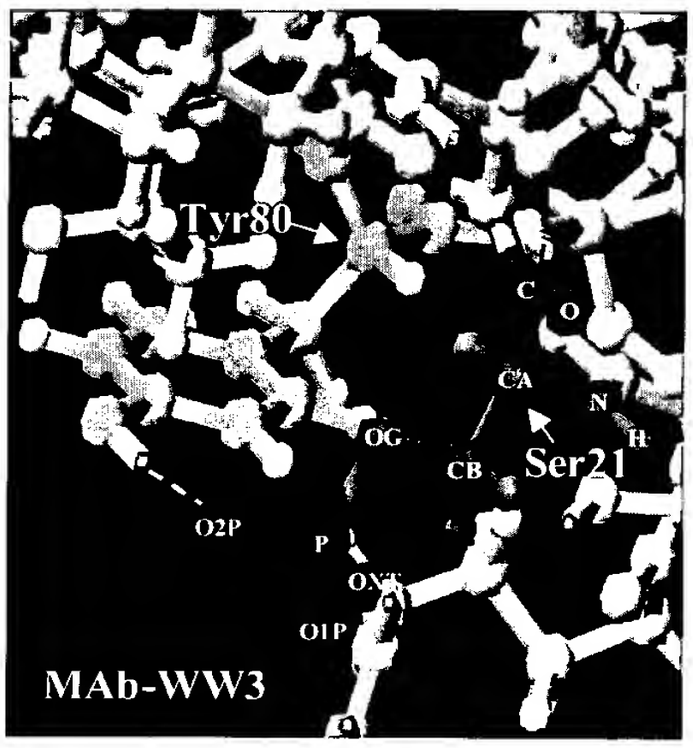

Fig. 12B

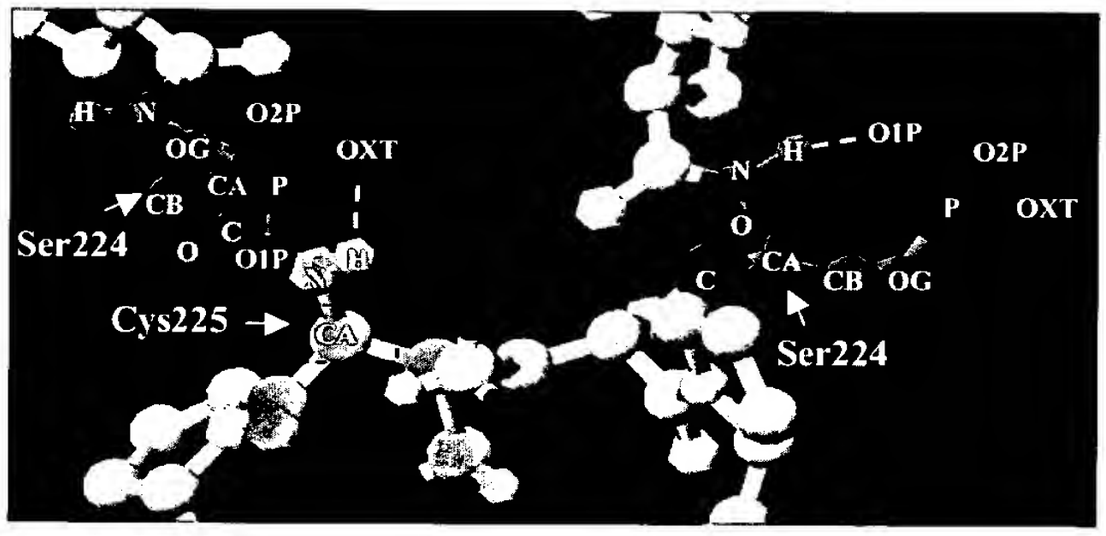

Fig. 13A

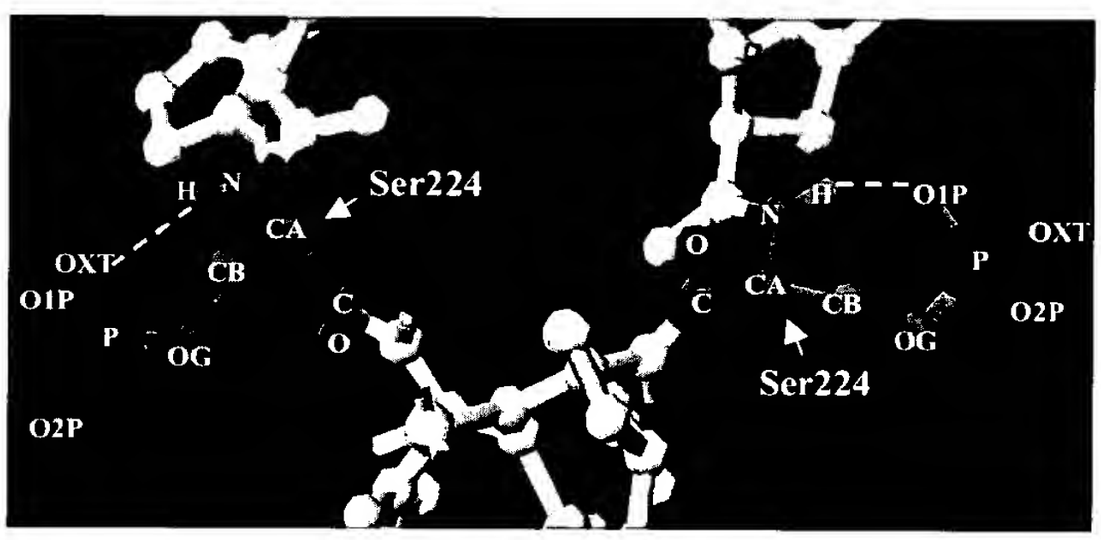

Fig. 13B

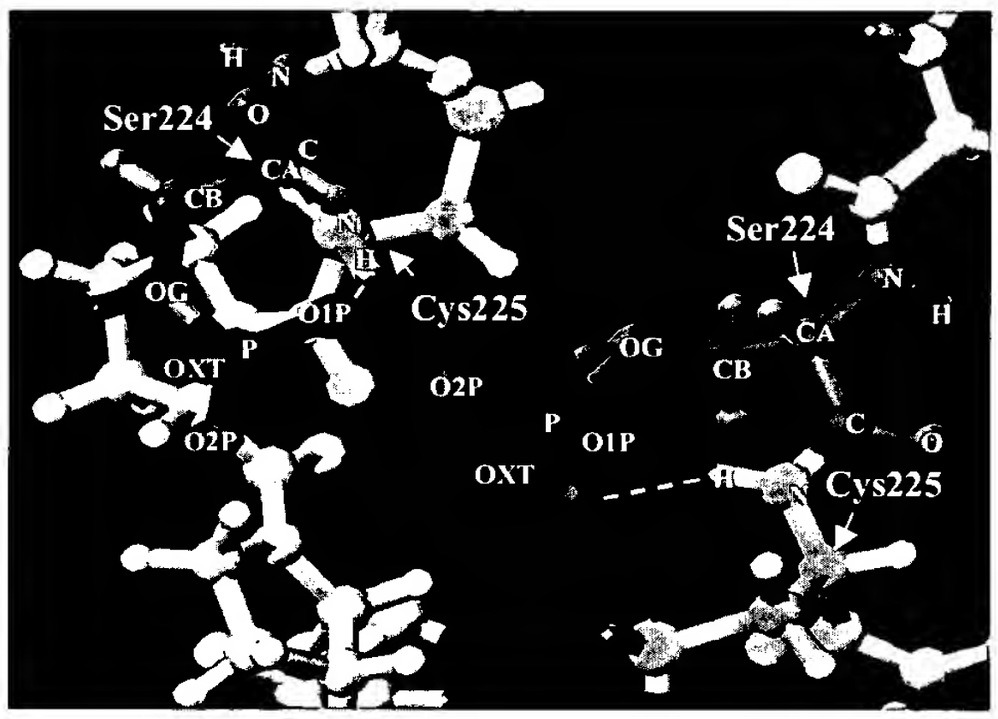

Fig. 14A

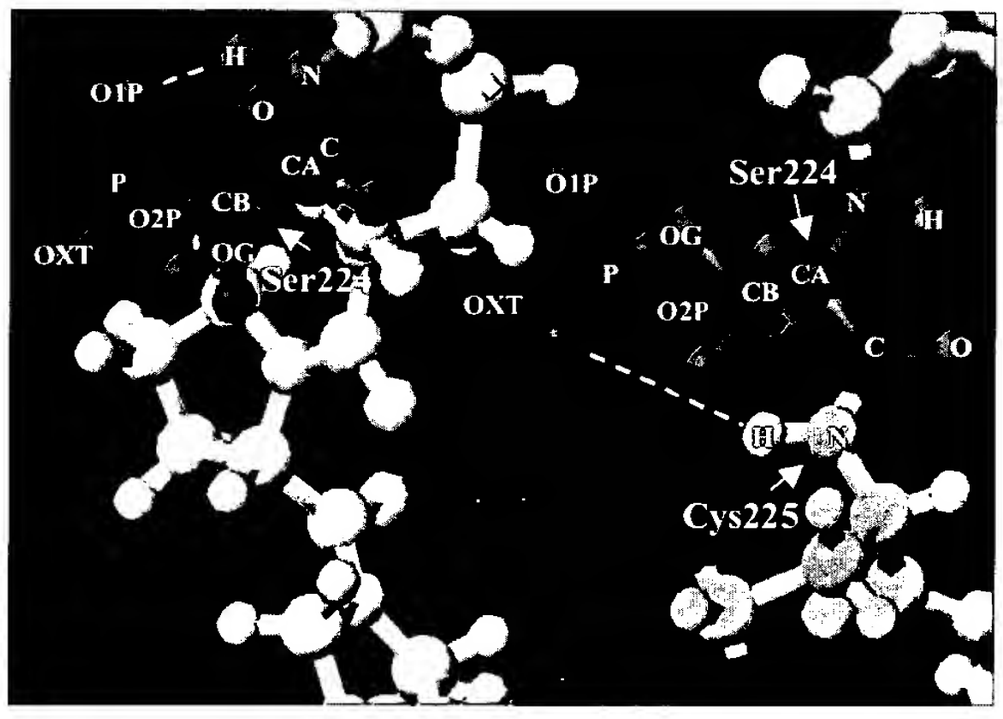

Fig. 14B

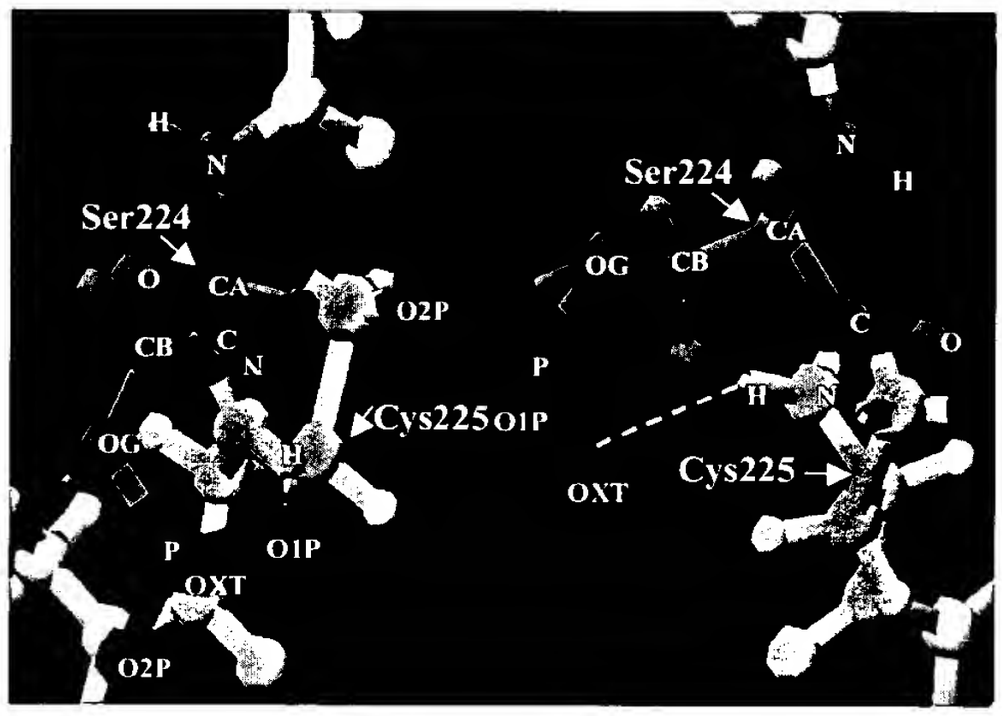

Fig. 15A

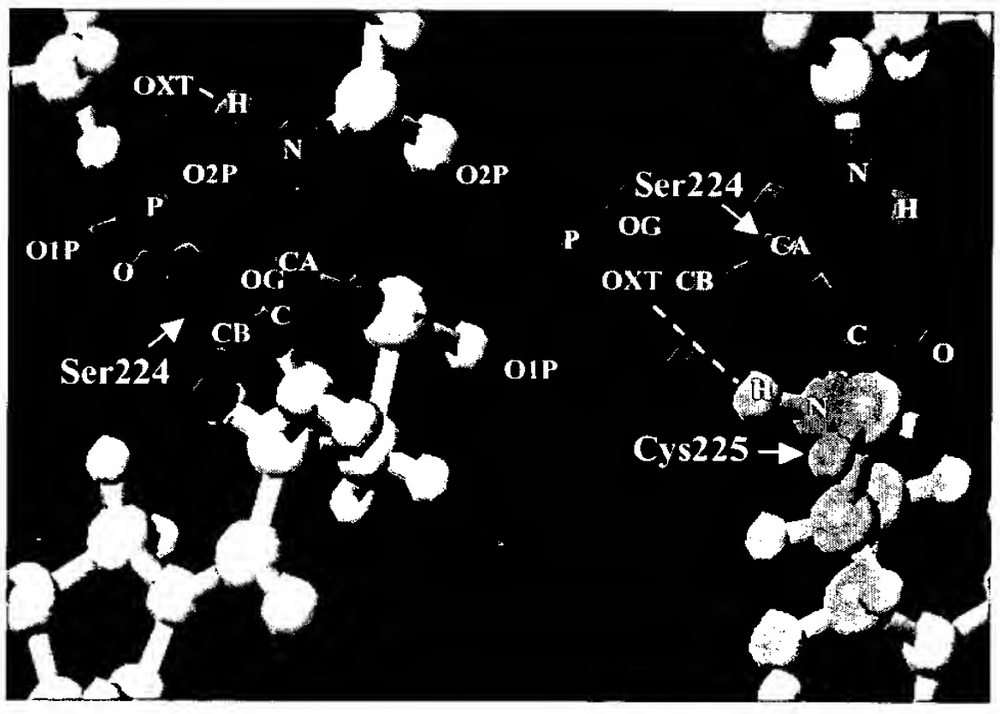

Fig. 15B

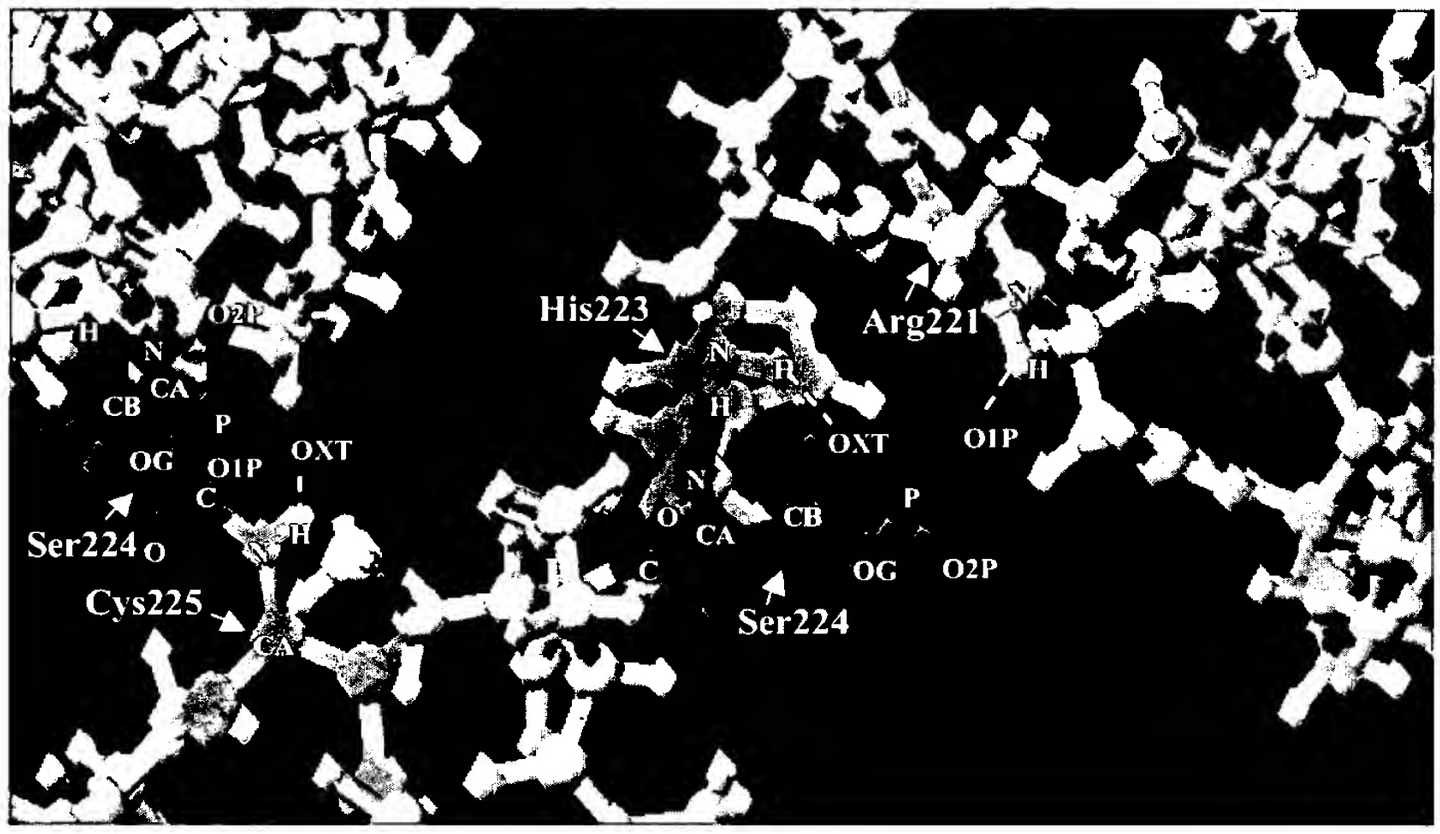

Fig. 16A

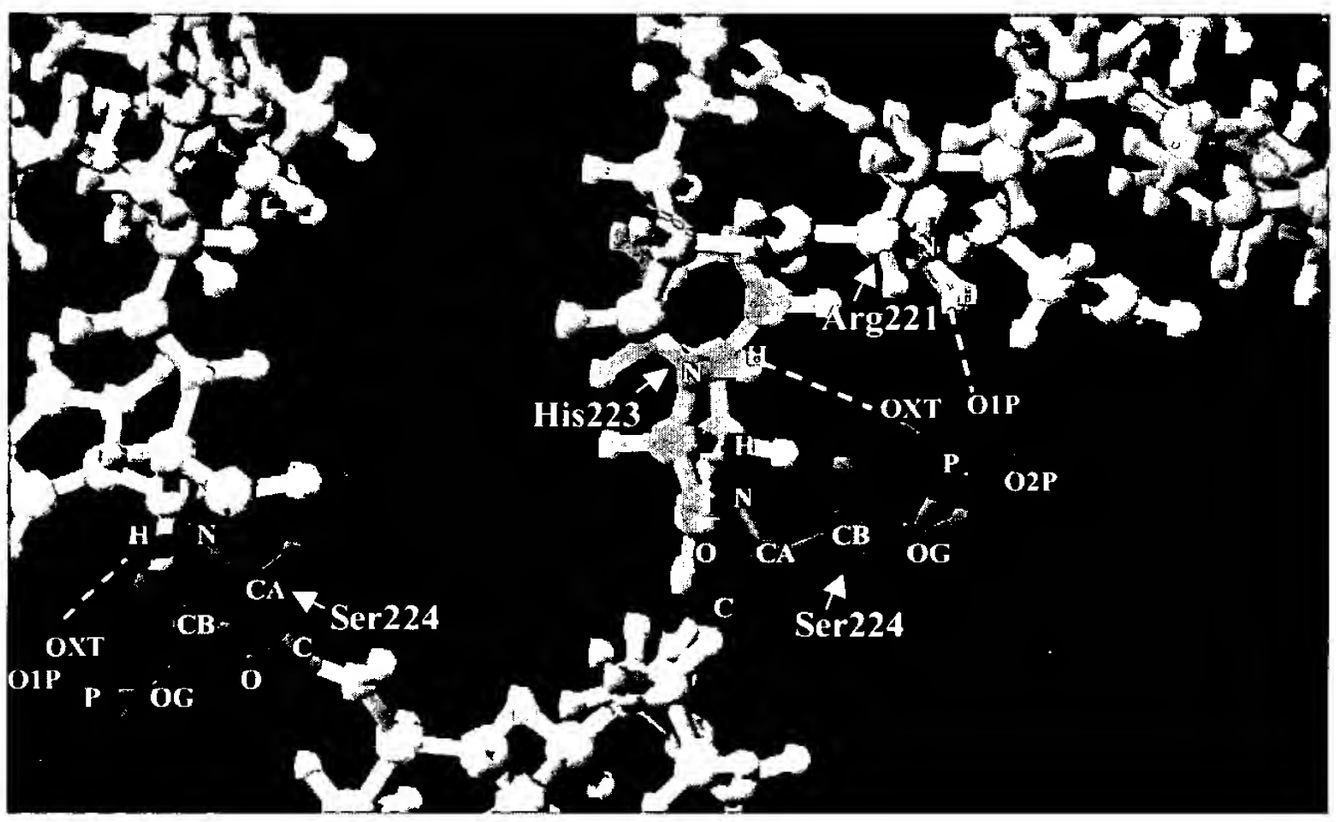

Fig. 16B

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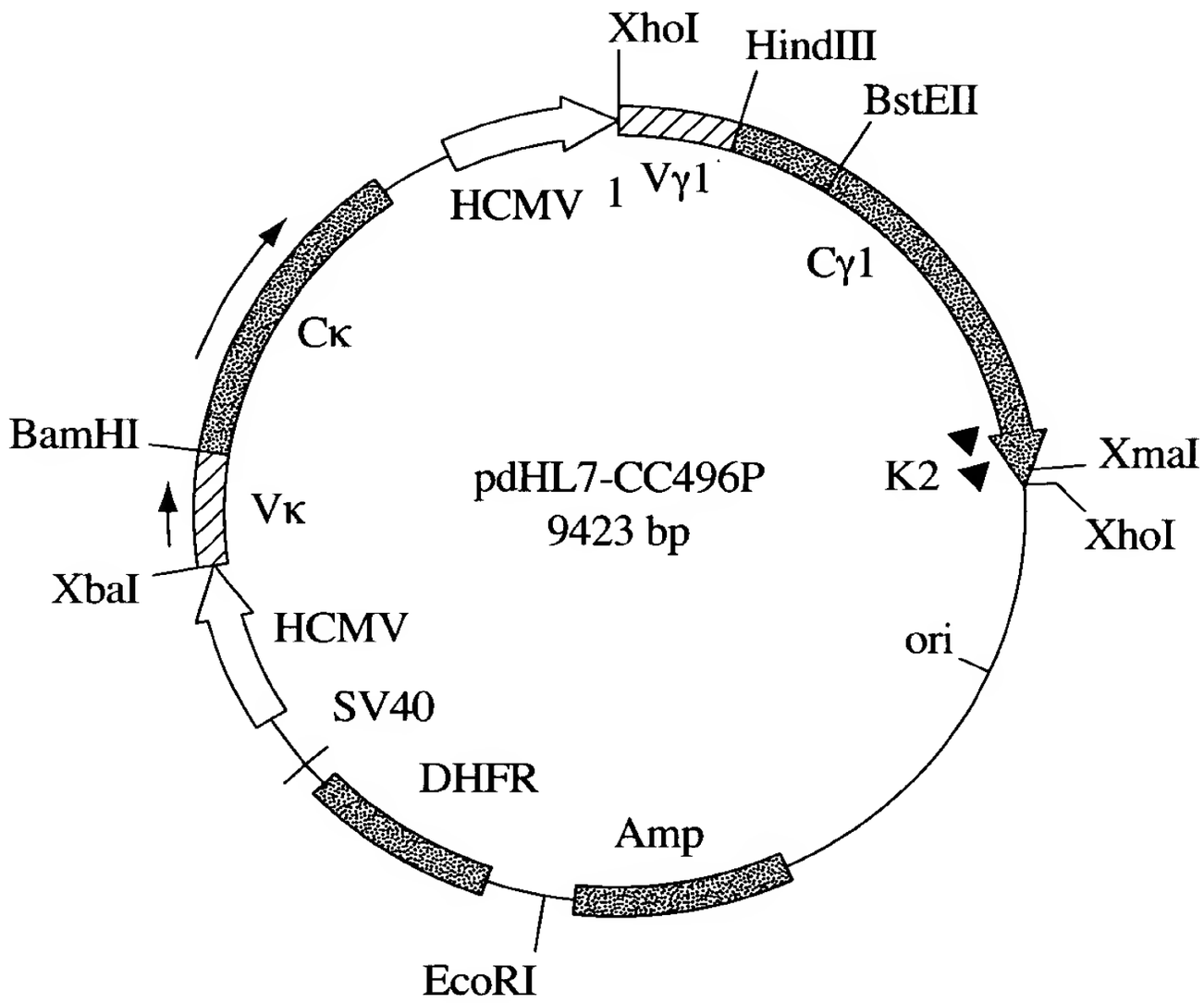

Fig. 17

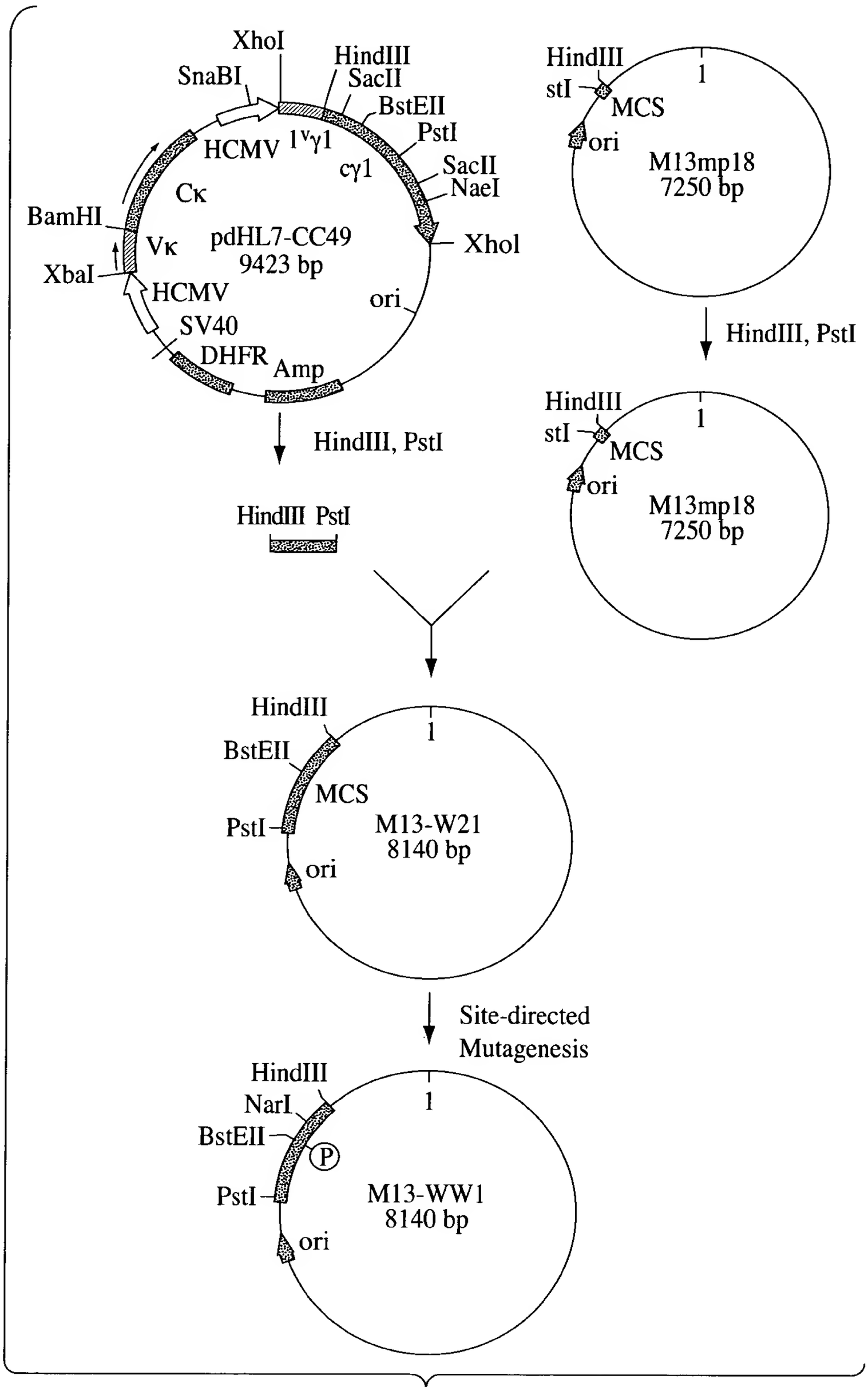
XhoI
HindIII
SacII
SnaBI
BstEII
PstI
HCMV
1vγ1
cγ1
SacII
NaeI
Cκ
BamHI
Vκ
pdHL7-CC49
9423 bp
XhoI
XbaI
HCMV
ori
SV40
DHFR
Amp
HindIII, PstI
HindIII PstI
HindIII
stI
MCS
ori
1
M13mp18
7250 bp
HindIII, PstI
HindIII
stI
MCS
ori
1
M13mp18
7250 bp
HindIII
BstEII
MCS
PstI
M13-W21
8140 bp
ori
1
Site-directed
Mutagenesis
HindIII
NarI
BstEII
P
PstI
M13-WW1
8140 bp
ori
1

Fig. 18A

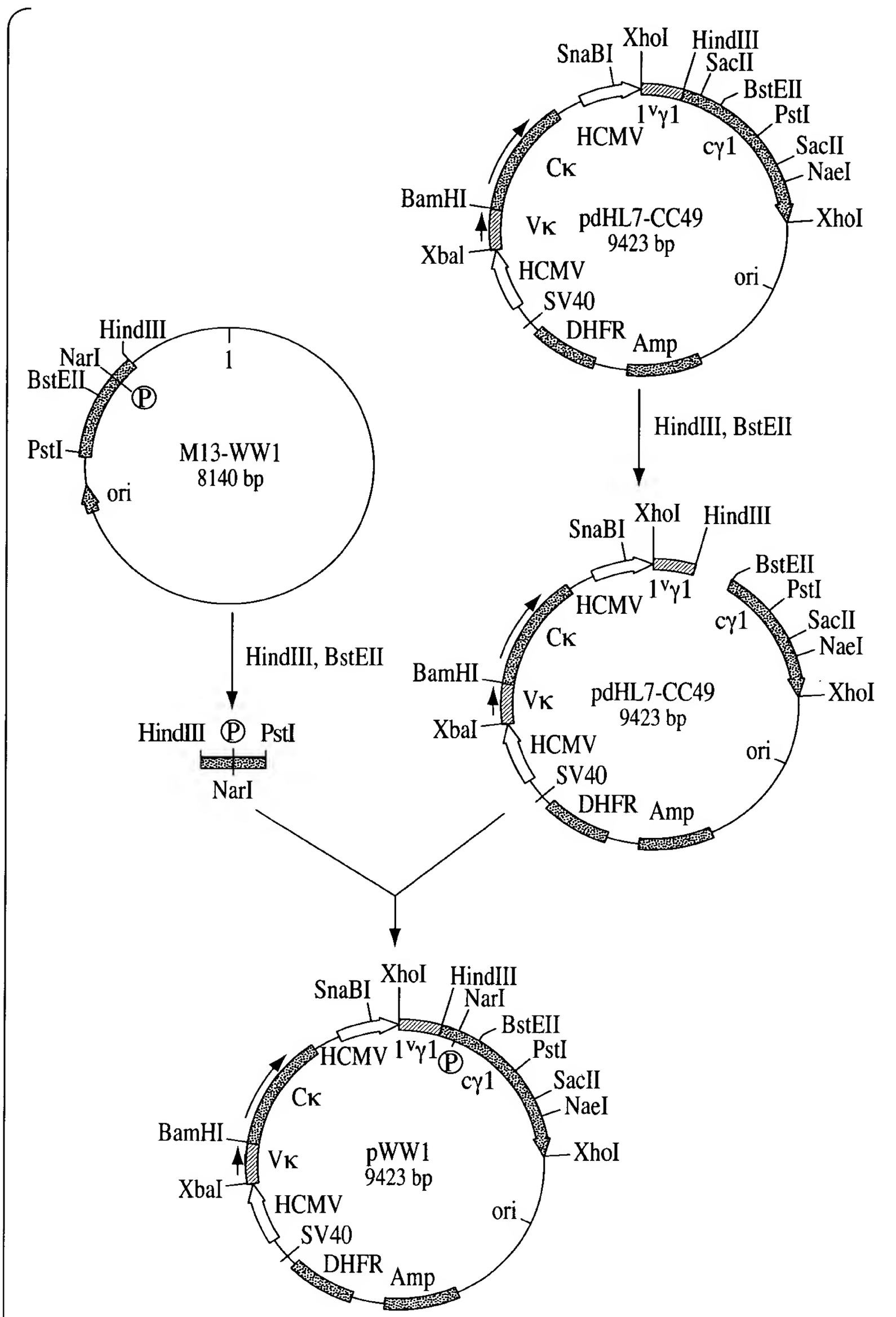
SnaBI
XhoI
HindIII
SacII
BstEII
PstI
SacII
NaeI
XhoI
ori
DHFR
Amp
SV40
HCMV
Cκ
Vκ
BamHI
XbaI
pdHL7-CC49
9423 bp
HindIII, BstEII
HindIII
NarI
BstEII
PstI
ori
M13-WW1
8140 bp
HindIII, BstEII
HindIII
NarI
pWW1
9423 bp

Fig. 18B

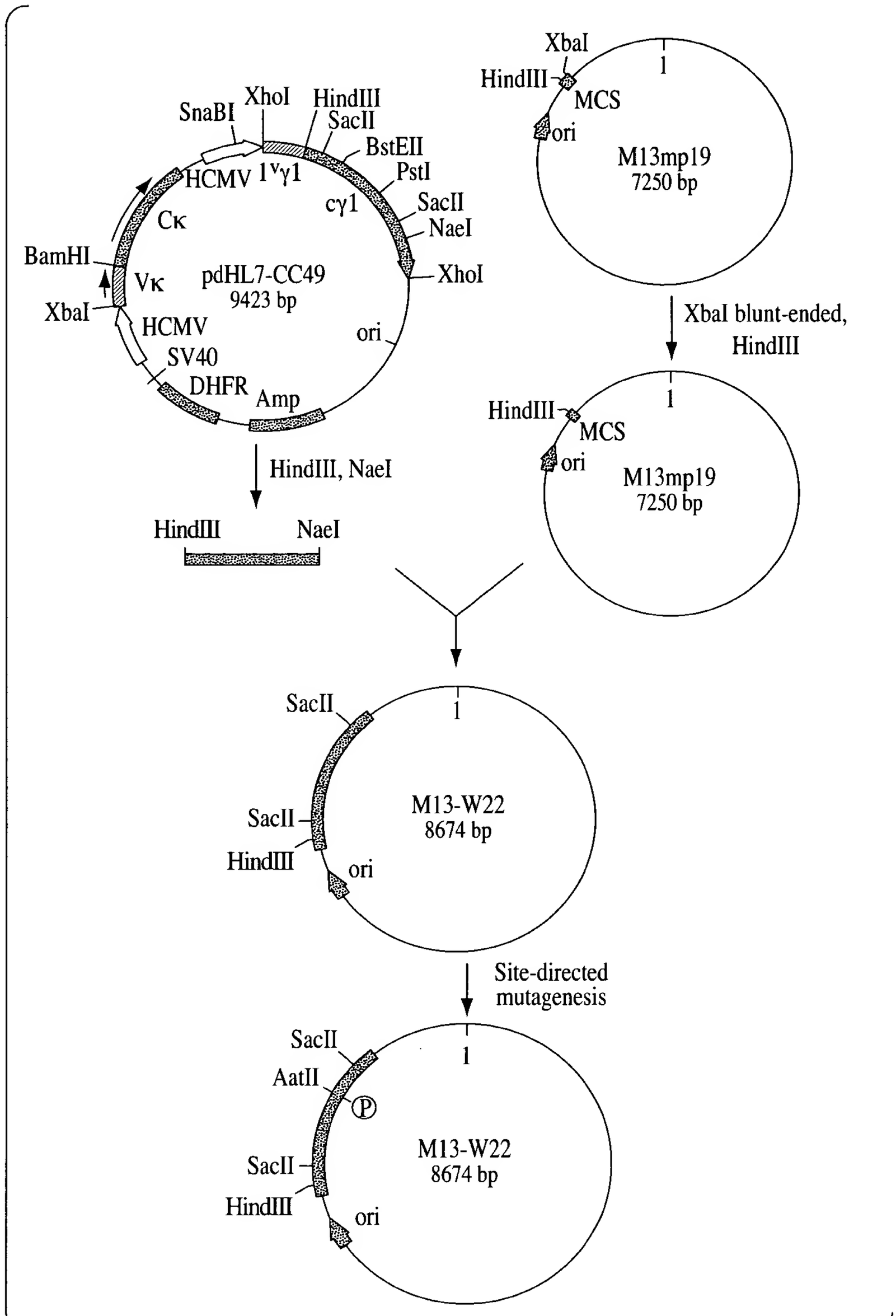
SnaBI
XhoI
HindIII
SacII
BstEII
PstI
SacII
NaeI
XhoI
HCMV
1vγ1
cγ1
Cκ
BamHI
Vκ
pdHL7-CC49
9423 bp
XbaI
HCMV
SV40
DHFR
Amp
ori
HindIII, NaeI
HindIII
NaeI
XbaI
HindIII
MCS
ori
M13mp19
7250 bp
1
XbaI blunt-ended,
HindIII
HindIII
MCS
ori
M13mp19
7250 bp
1
SacII
SacII
HindIII
ori
M13-W22
8674 bp
1
Site-directed
mutagenesis
SacII
AatII
P
SacII
HindIII
ori
M13-W22
8674 bp
1

Fig. 19A

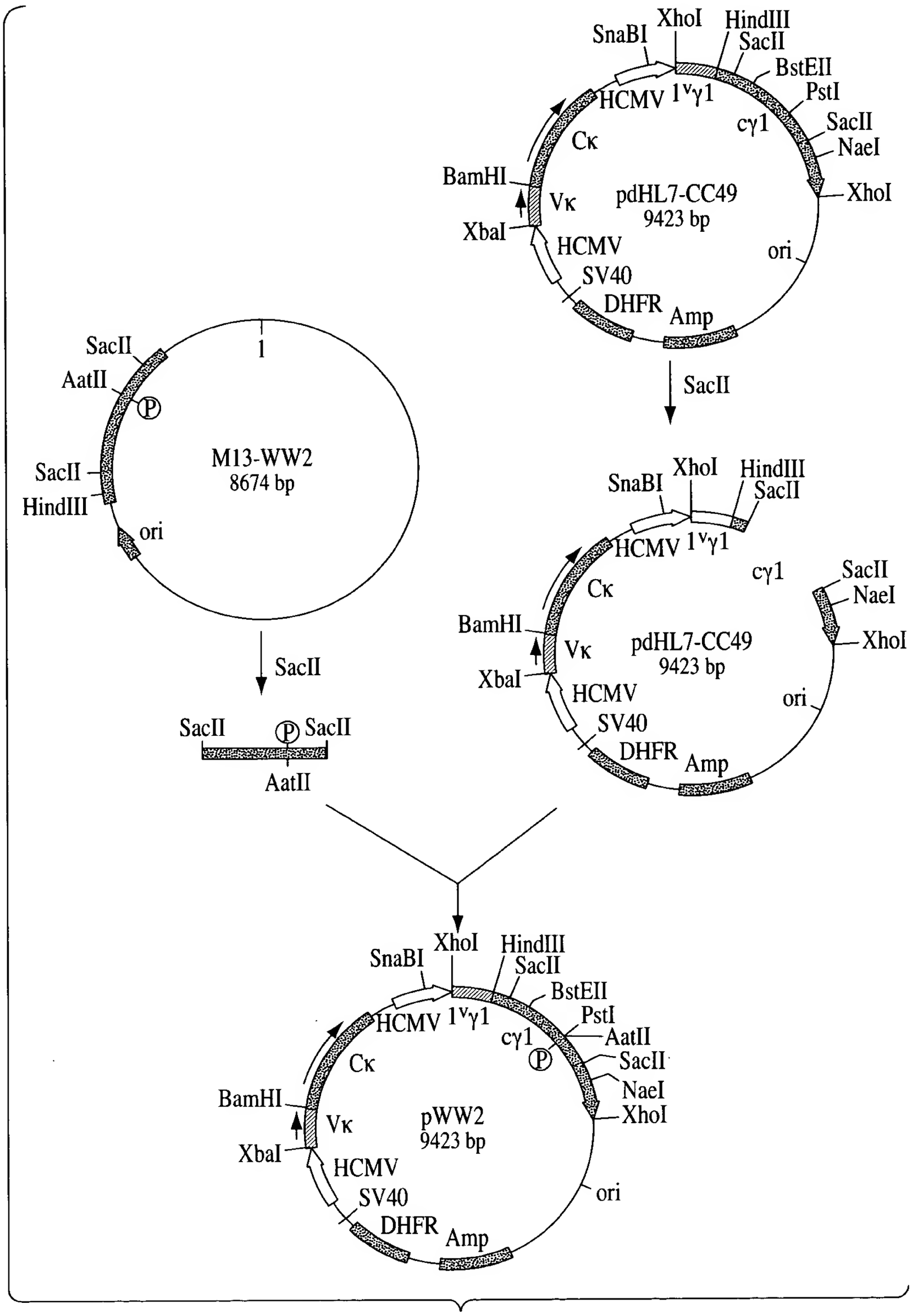
SacII
AatII
P
1
M13-WW2
8674 bp
SacII
HindIII
ori
SacII
SacII
P
SacII
AatII
XhoI
HindIII
SnaBI
SacII
BstEII
PstI
AatII
SacII
NaeI
XhoI
HCMV
1vγ1
cγ1
Cκ
BamHI
Vκ
XbaI
HCMV
SV40
DHFR
Amp
ori
pWW2
9423 bp
SnaBI
XhoI
HindIII
SacII
HCMV
1vγ1
cγ1
Cκ
SacII
NaeI
XhoI
BamHI
Vκ
XbaI
HCMV
SV40
DHFR
Amp
ori
pdHL7-CC49
9423 bp
SnaBI
XhoI
HindIII
SacII
BstEII
PstI
HCMV
1vγ1
cγ1
Cκ
SacII
NaeI
XhoI
BamHI
Vκ
XbaI
HCMV
SV40
DHFR
Amp
ori
pdHL7-CC49
9423 bp

Fig. 19B

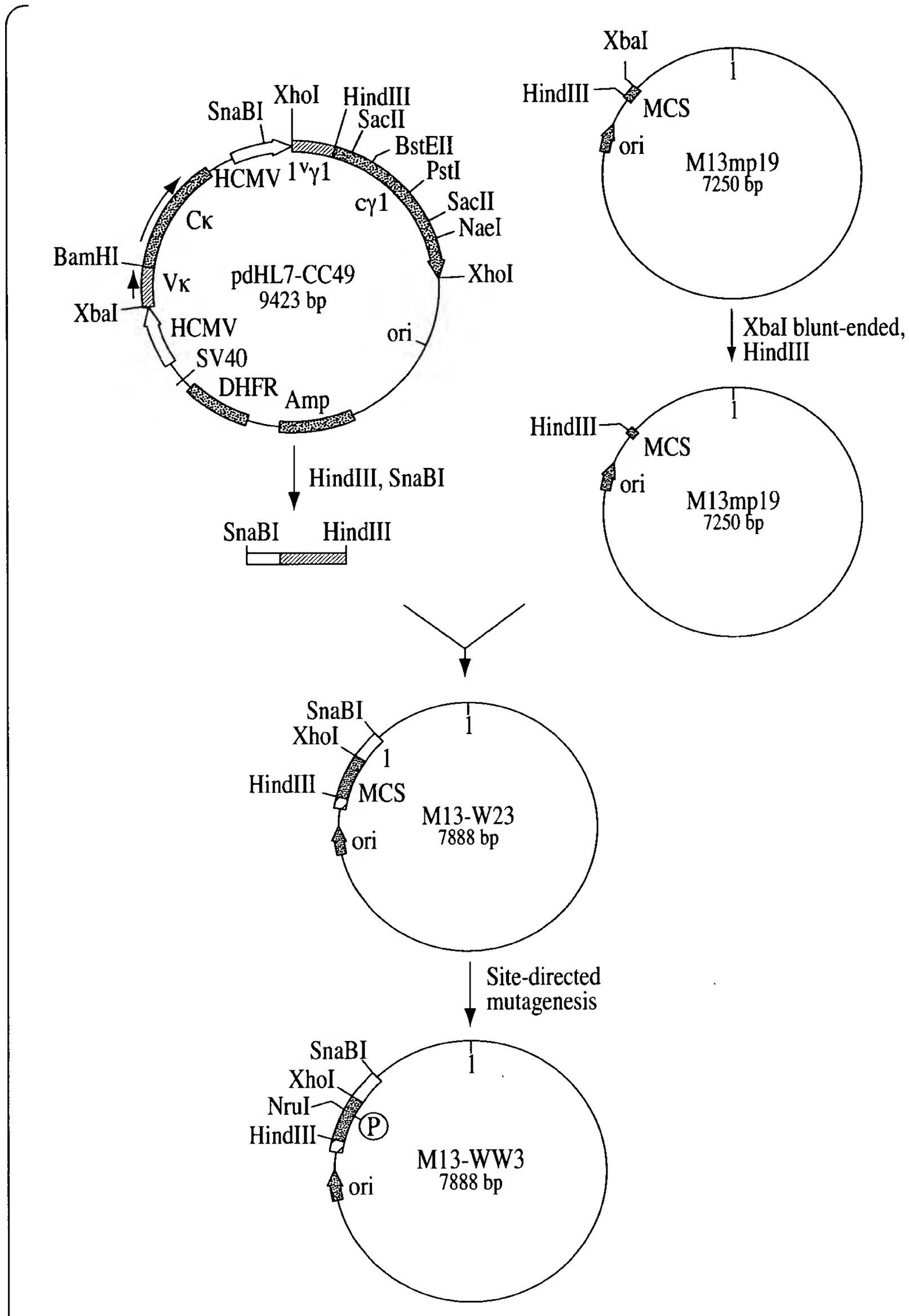
SnaBI
XhoI
HindIII
SacII
BstEII
PstI
SacII
NaeI
XhoI
ori
HCMV
SV40
DHFR
Amp
HCMV 1vγ1
cγ1
Cκ
BamHI
Vκ
XbaI
pdHL7-CC49
9423 bp
HindIII, SnaBI
SnaBI
HindIII
XbaI
HindIII
MCS
ori
M13mp19
7250 bp
1
XbaI blunt-ended,
HindIII
SnaBI
XhoI
HindIII
MCS
ori
M13-W23
7888 bp
Site-directed
mutagenesis
SnaBI
XhoI
NruI
HindIII
P
ori
M13-WW3
7888 bp

Fig. 20A

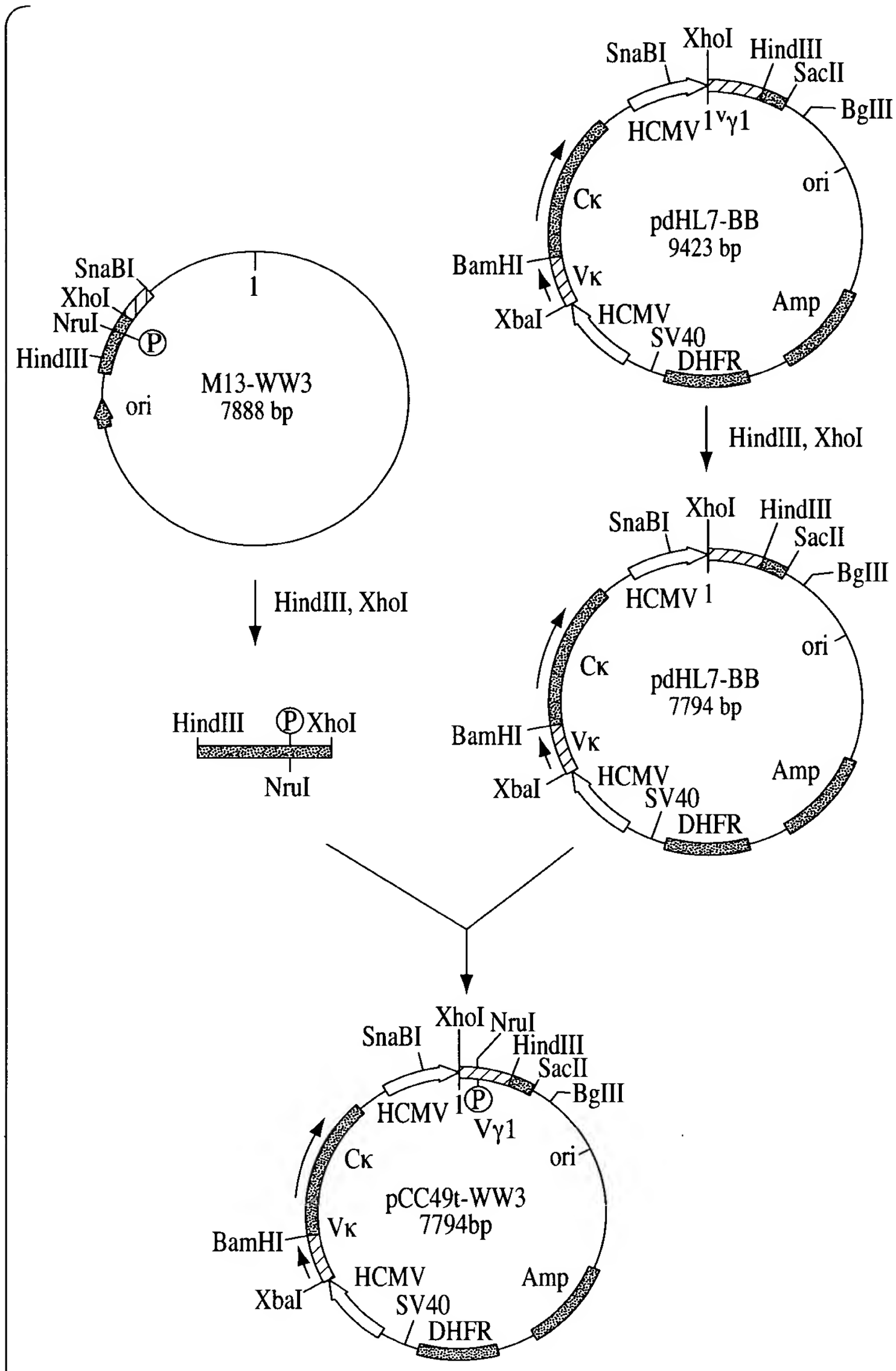
SnaBI
XhoI
NruI
HindIII
P
ori
1
M13-WW3
7888 bp
HindIII, XhoI
HindIII
P
XhoI
NruI
SnaBI
XhoI
HindIII
SacII
BgIII
HCMV 1vγ1
ori
Cκ
pdHL7-BB
9423 bp
BamHI
Vκ
XbaI
HCMV
SV40
DHFR
Amp
HindIII, XhoI
SnaBI
XhoI
HindIII
SacII
BgIII
HCMV 1
ori
Cκ
pdHL7-BB
7794 bp
BamHI
Vκ
XbaI
HCMV
SV40
DHFR
Amp
XhoI NruI
SnaBI
XhoI
NruI
HindIII
SacII
BgIII
HCMV 1
P
Vγ1
Cκ
ori
pCC49t-WW3
7794bp
Vκ
BamHI
XbaI
HCMV
SV40
DHFR
Amp

Fig. 20B

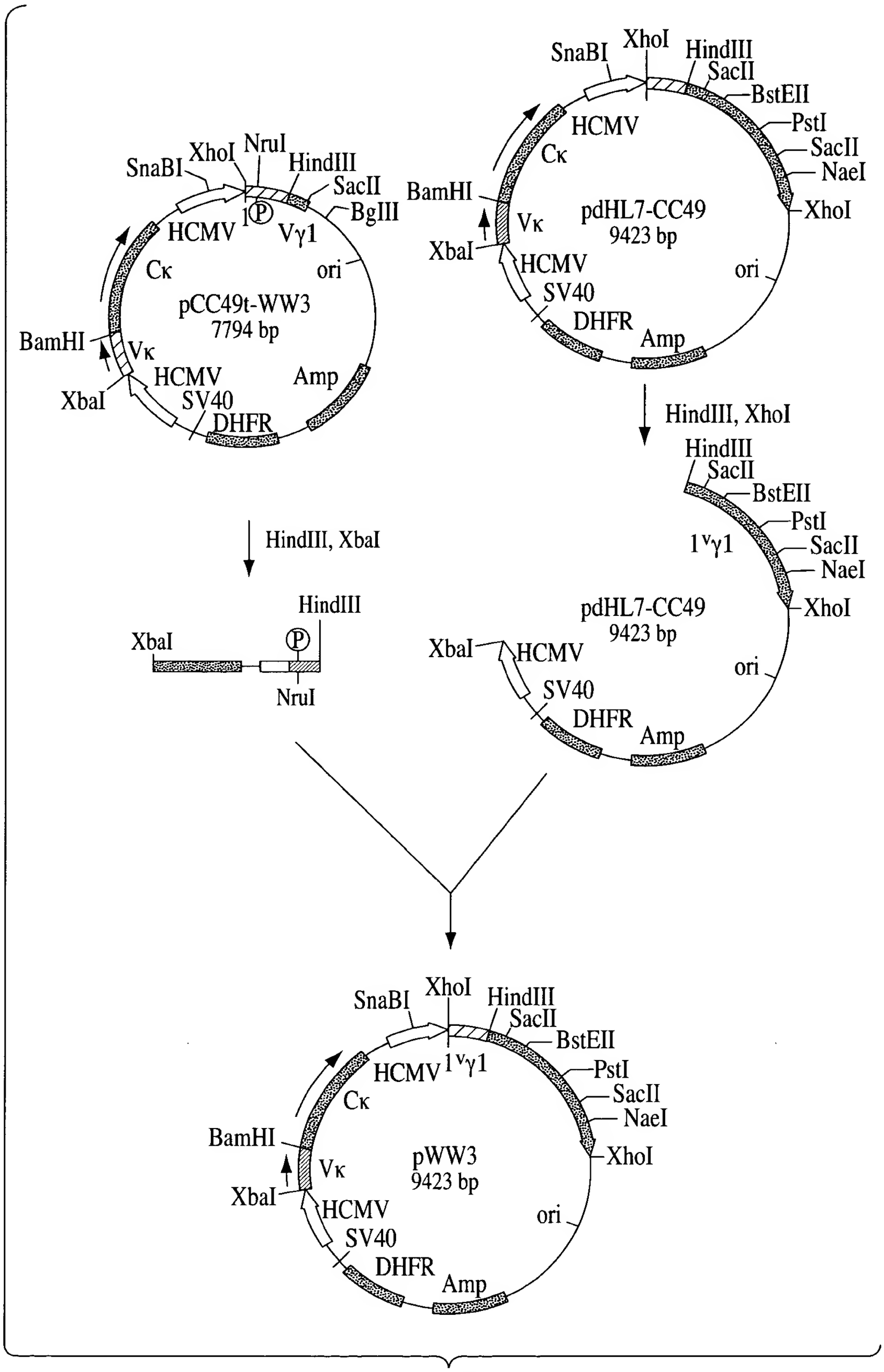
SnaBI
XhoI
NruI
HindIII
SacII
BgIII
HCMV
1
P
Vγ1
Cκ
ori
pCC49t-WW3
7794 bp
BamHI
Vκ
HCMV
XbaI
SV40
DHFR
Amp
HindIII, XbaI
HindIII
XbaI
P
NruI
SnaBI
XhoI
HindIII
SacII
BstEII
PstI
SacII
NaeI
XhoI
HCMV
Cκ
BamHI
Vκ
pdHL7-CC49
9423 bp
XbaI
HCMV
SV40
DHFR
Amp
ori
HindIII, XhoI
HindIII
SacII
BstEII
PstI
1vγ1
SacII
NaeI
XhoI
pdHL7-CC49
9423 bp
XbaI
HCMV
SV40
DHFR
Amp
ori
XhoI
SnaBI
XhoI
HindIII
SacII
BstEII
PstI
SacII
NaeI
XhoI
HCMV
1vγ1
Cκ
BamHI
Vκ
pWW3
9423 bp
XbaI
HCMV
SV40
DHFR
Amp
ori

Fig. 20C

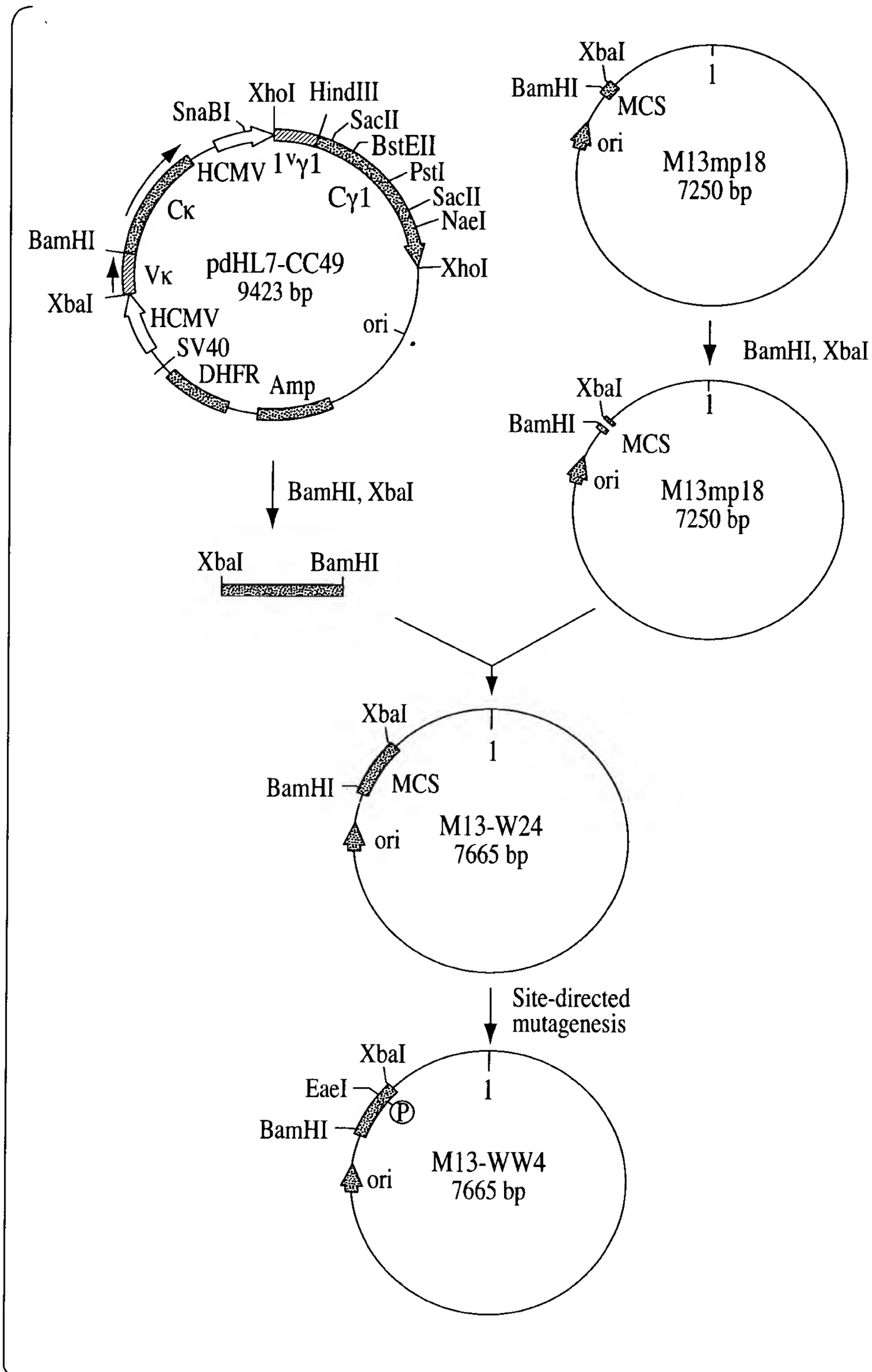
SnaBI
XhoI
HindIII
SacII
BstEII
PstI
SacII
NaeI
XhoI
ori
SV40
DHFR
Amp
HCMV
HCMV
Cκ
Cγ1
BamHI
XbaI
Vκ
pdHL7-CC49
9423 bp
XbaI
BamHI
MCS
ori
M13mp18
7250 bp
1
BamHI, XbaI
XbaI
BamHI
MCS
ori
M13mp18
7250 bp
1
BamHI, XbaI
XbaI
BamHI
MCS
ori
M13-W24
7665 bp
1
Site-directed
mutagenesis
XbaI
EaeI
BamHI
P
ori
M13-WW4
7665 bp
1

Fig. 21A

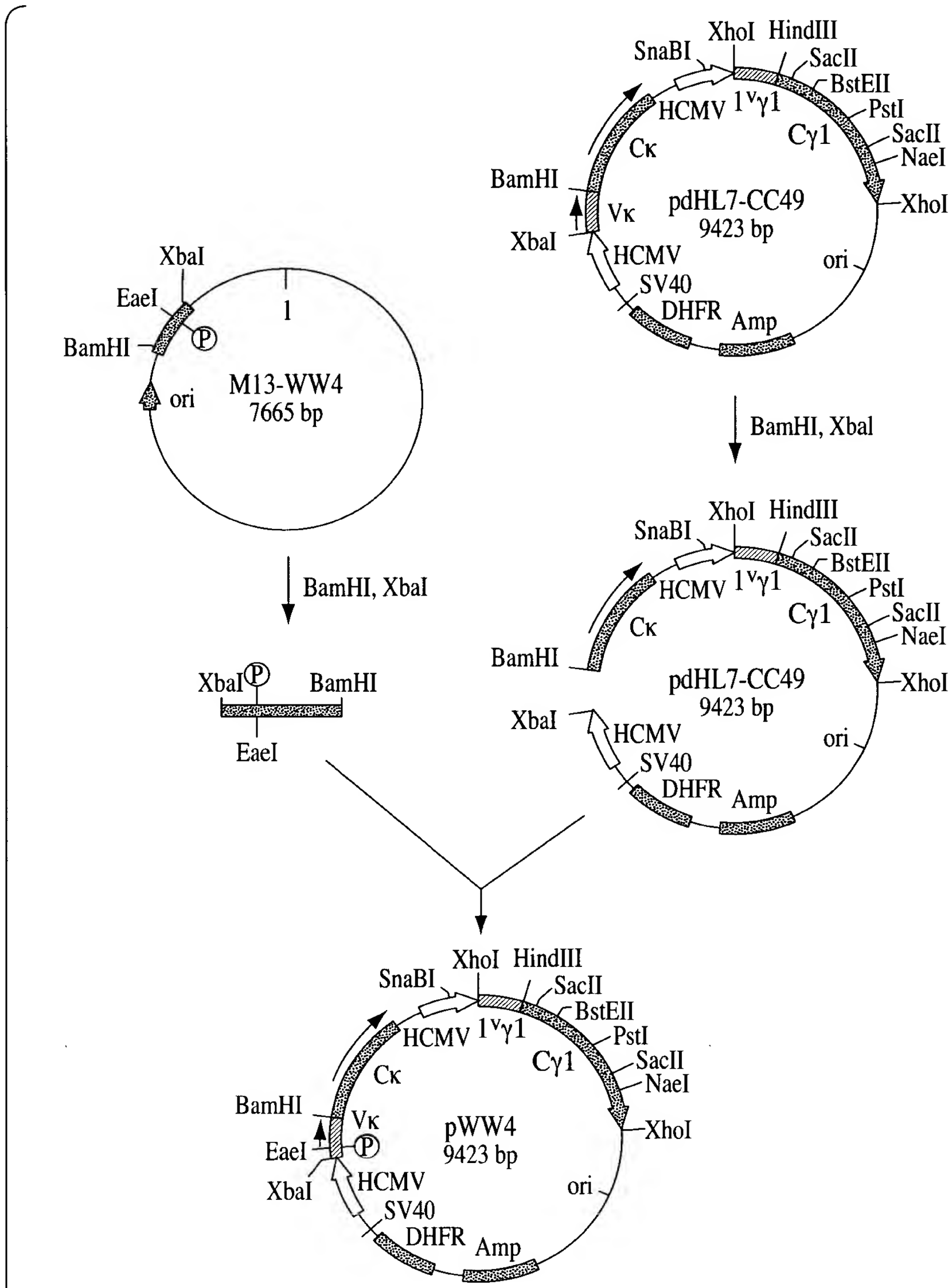
XbaI
EaeI
BamHI
P
1
ori
M13-WW4
7665 bp
BamHI, XbaI
XbaI P BamHI
EaeI
XhoI HindIII
SnaBI
SacII
BstEII
HCMV 1^Vγ1
PstI
Cγ1
SacII
NaeI
Cκ
BamHI
Vκ
pdHL7-CC49
9423 bp
XhoI
XbaI
HCMV
ori
SV40
DHFR
Amp
BamHI, XbaI
XhoI HindIII
SnaBI
SacII
BstEII
HCMV 1^Vγ1
PstI
Cγ1
SacII
NaeI
Cκ
BamHI
pdHL7-CC49
9423 bp
XhoI
XbaI
HCMV
ori
SV40
DHFR
Amp
XhoI HindIII
SnaBI
SacII
BstEII
HCMV 1^Vγ1
PstI
Cγ1
SacII
NaeI
Cκ
BamHI
Vκ
pWW4
9423 bp
XhoI
EaeI
P
XbaI
HCMV
ori
SV40
DHFR
Amp

Fig. 21B

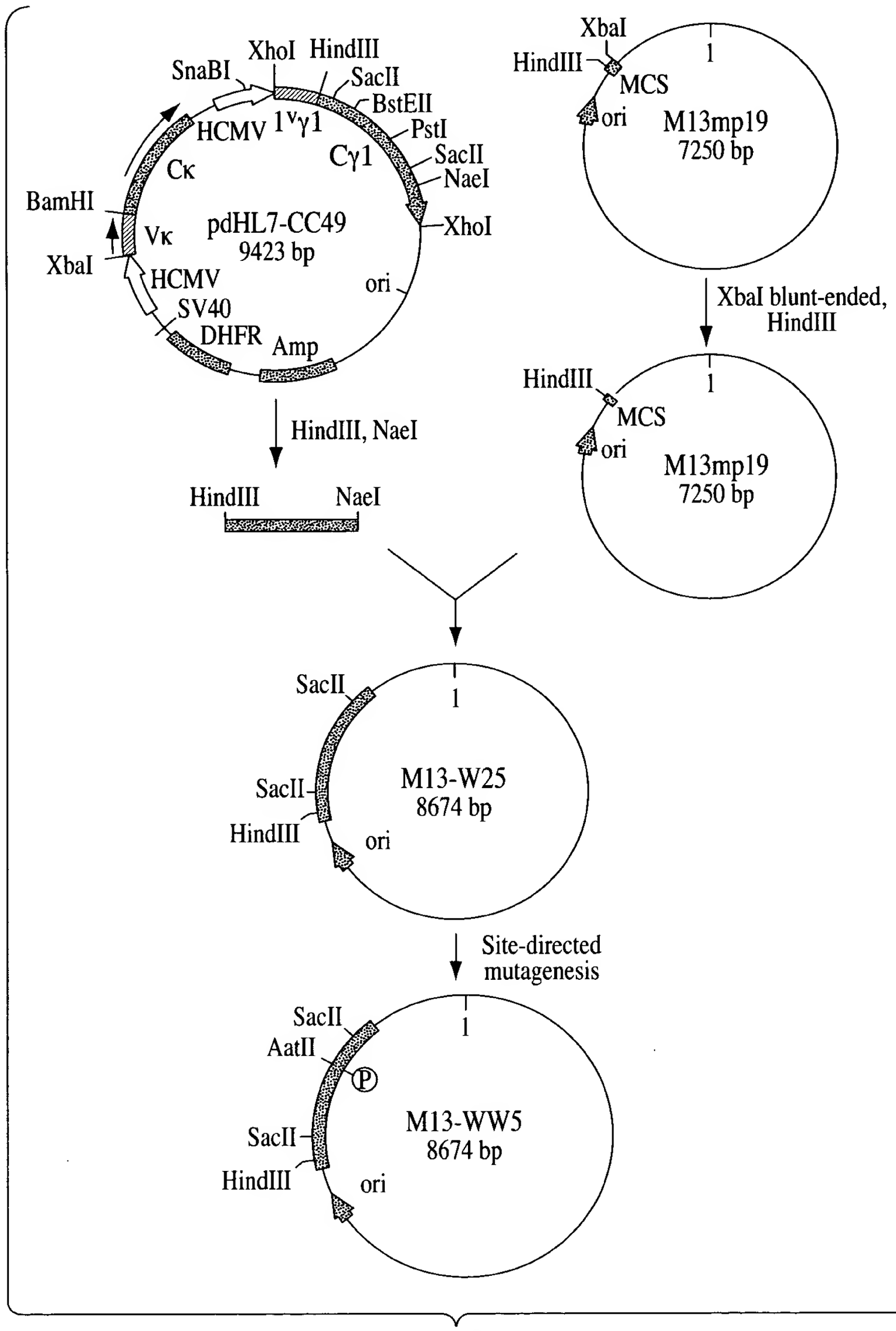
XhoI
HindIII
SnaBI
SacII
BstEII
PstI
SacII
NaeI
XhoI
HCMV
1vγ1
Cγ1
Cκ
BamHI
Vκ
pdHL7-CC49
9423 bp
XbaI
HCMV
SV40
DHFR
Amp
ori
HindIII, NaeI
HindIII
NaeI
XbaI
HindIII
MCS
ori
M13mp19
7250 bp
1
XbaI blunt-ended,
HindIII
HindIII
MCS
ori
M13mp19
7250 bp
1
SacII
SacII
HindIII
ori
M13-W25
8674 bp
1
Site-directed
mutagenesis
SacII
AatII
P
SacII
HindIII
ori
M13-WW5
8674 bp
1

Fig. 22A

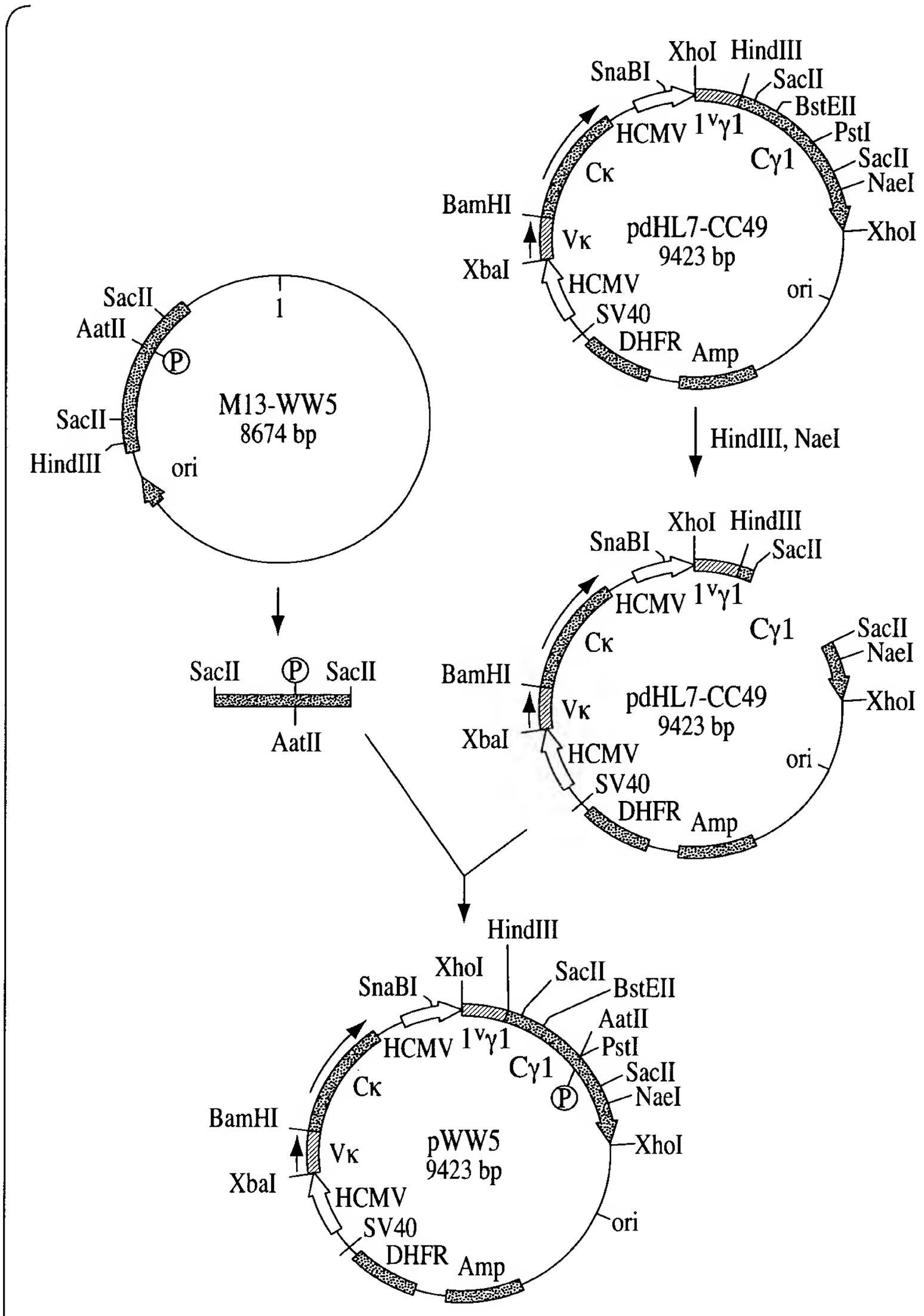
SacII
AatII
P
1
M13-WW5
8674 bp
SacII
HindIII
ori
SacII P SacII
AatII
XhoI HindIII
SnaBI
SacII
HCMV 1vγ1
BstEII
PstI
Cγ1
SacII
NaeI
Cκ
BamHI
Vκ
pdHL7-CC49
9423 bp
XhoI
XbaI
HCMV
ori
SV40
DHFR
Amp
HindIII, NaeI
XhoI HindIII
SnaBI
SacII
HCMV 1vγ1
Cγ1
SacII
NaeI
Cκ
BamHI
Vκ
pdHL7-CC49
9423 bp
XhoI
XbaI
HCMV
ori
SV40
DHFR
Amp
HindIII
XhoI
SacII
BstEII
SnaBI
AatII
HCMV 1vγ1
PstI
Cγ1
SacII
P
NaeI
Cκ
BamHI
pWW5
9423 bp
XhoI
Vκ
XbaI
HCMV
ori
SV40
DHFR
Amp

Fig. 22B

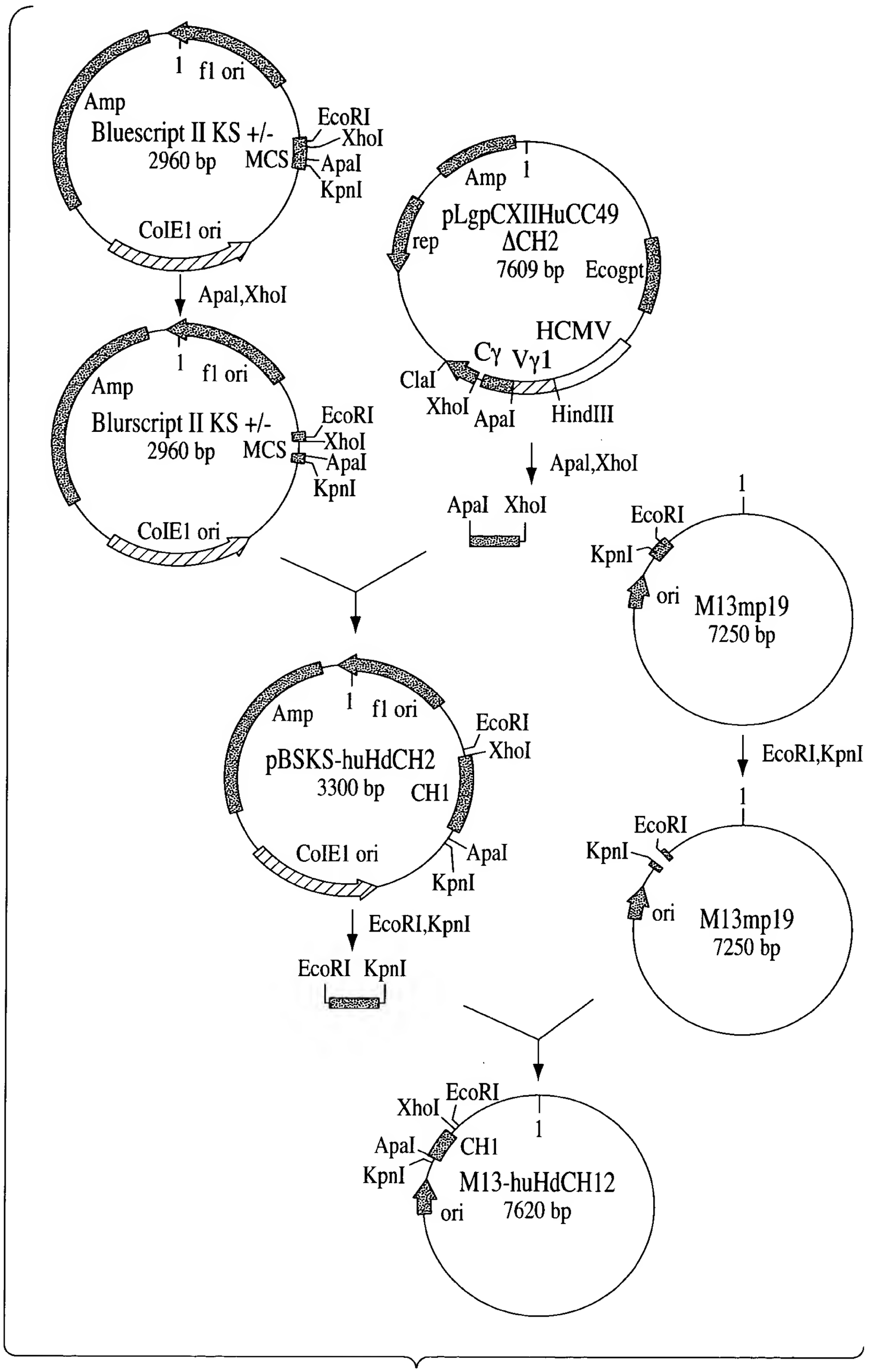
1
f1 ori
Amp
Bluescript II KS +/-
2960 bp
MCS
EcoRI
XhoI
ApaI
KpnI
ColE1 ori
ApaI,XhoI
Amp
1
pLgpCXIIHuCC49
ΔCH2
7609 bp
rep
Ecogpt
HCMV
Cγ Vγ1
ClaI
XhoI
ApaI
HindIII
ApaI,XhoI
ApaI XhoI
1
EcoRI
KpnI
ori
M13mp19
7250 bp
EcoRI,KpnI
Amp
1
f1 ori
pBSKS-huHdCH2
3300 bp
CH1
EcoRI
XhoI
ColE1 ori
ApaI
KpnI
EcoRI,KpnI
EcoRI KpnI
1
EcoRI
KpnI
ori
M13mp19
7250 bp
XhoI
EcoRI
ApaI
CH1
KpnI
1
M13-huHdCH12
ori
7620 bp

Fig. 23A

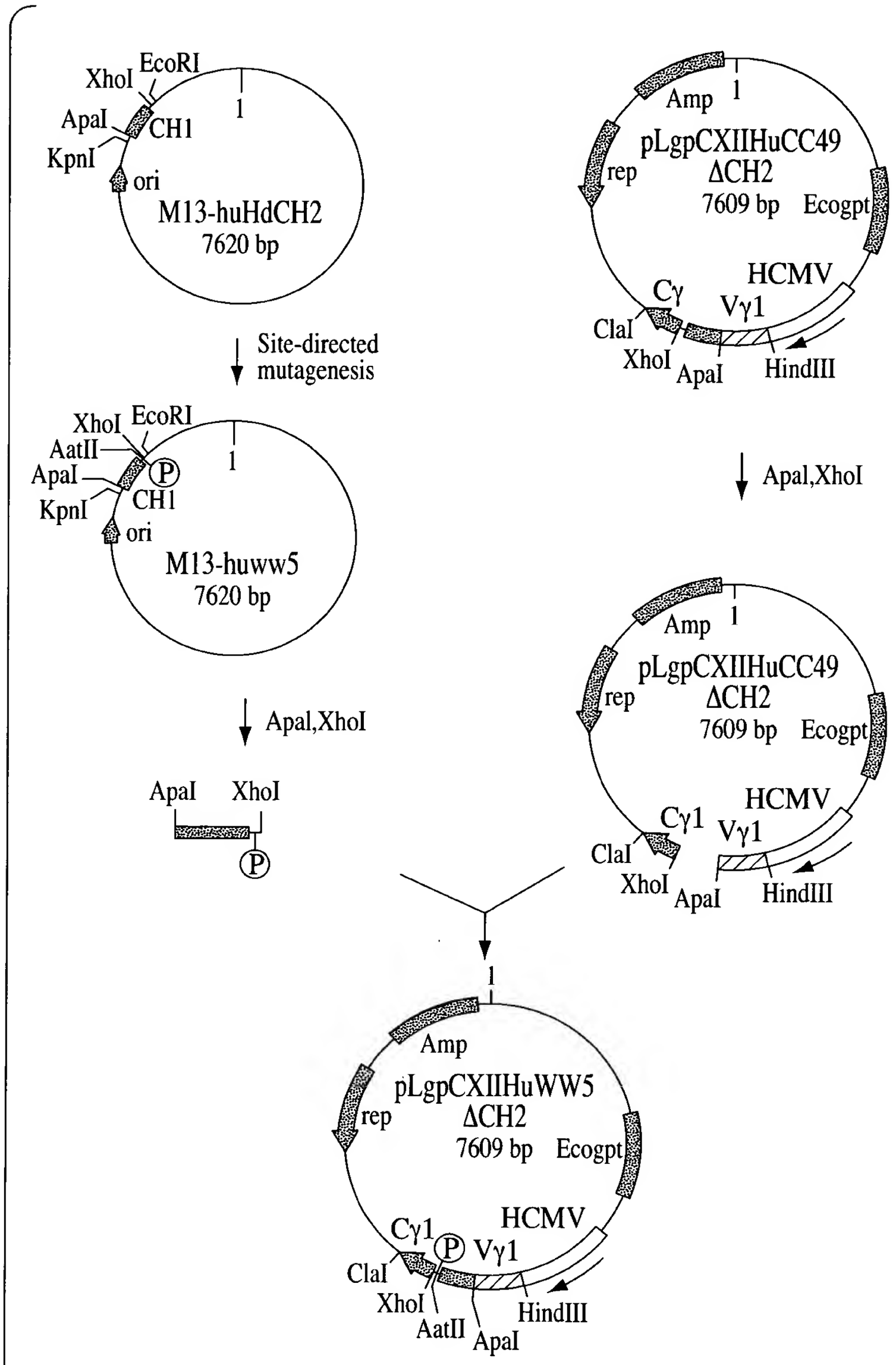
XhoI
EcoRI
ApaI
CH1
KpnI
ori
1
M13-huHdCH2
7620 bp
Site-directed
mutagenesis
XhoI
EcoRI
AatII
ApaI
P
CH1
KpnI
ori
1
M13-huww5
7620 bp
ApaI,XhoI
ApaI
XhoI
P
Amp
1
pLgpCXIIHuCC49
ΔCH2
7609 bp
rep
Ecogpt
HCMV
Cγ
Vγ1
ClaI
XhoI
ApaI
HindIII
ApaI,XhoI
Amp
1
pLgpCXIIHuCC49
ΔCH2
7609 bp
rep
Ecogpt
HCMV
Cγ1
Vγ1
ClaI
XhoI
ApaI
HindIII
1
Amp
pLgpCXIIHuWW5
ΔCH2
7609 bp
rep
Ecogpt
HCMV
Cγ1
P
Vγ1
ClaI
XhoI
AatII
ApaI
HindIII

Fig. 23B

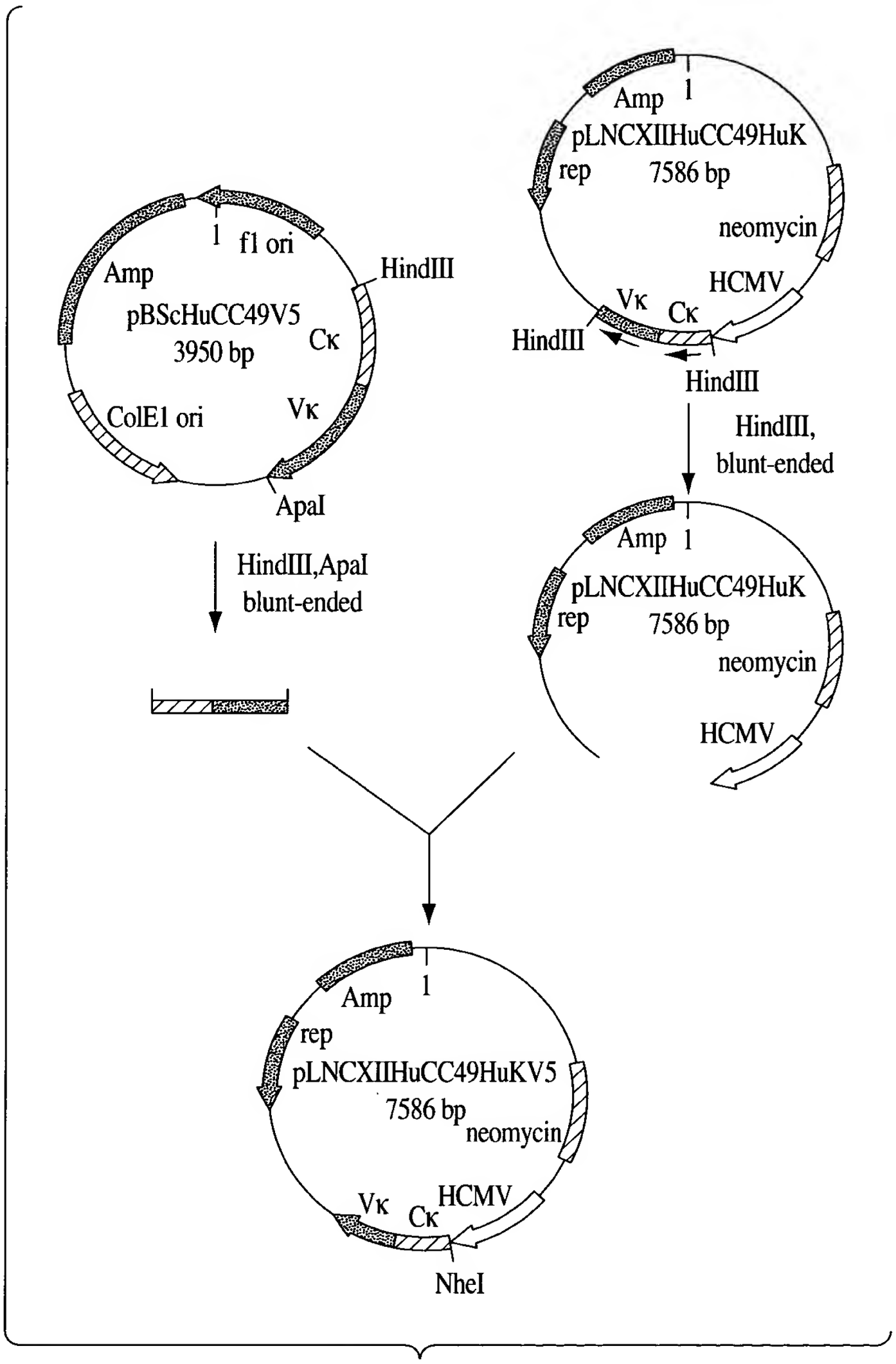
1
f1 ori
Amp
HindIII
pBScHuCC49V5
3950 bp
Cκ
ColE1 ori
Vκ
ApaI
HindIII,ApaI
blunt-ended
Amp
1
pLNCXIIHuCC49HuK
rep
7586 bp
neomycin
HCMV
Vκ
Cκ
HindIII
HindIII
HindIII,
blunt-ended
Amp
1
pLNCXIIHuCC49HuK
rep
7586 bp
neomycin
HCMV
Amp
1
rep
pLNCXIIHuCC49HuKV5
7586 bp
neomycin
Vκ
Cκ
HCMV
NheI

Fig. 24

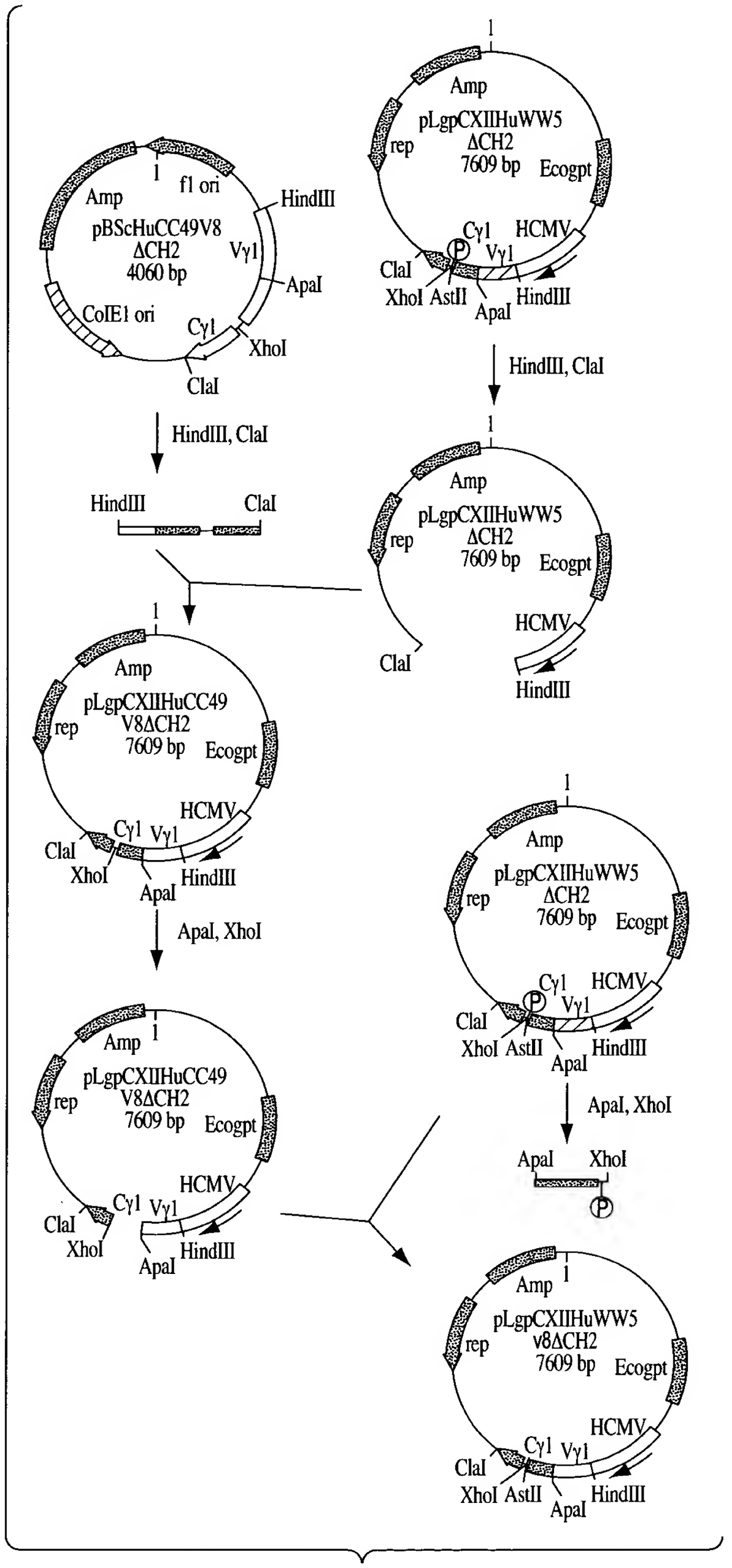
1
Amp
f1 ori
HindIII
pBScHuCC49V8
ΔCH2
4060 bp
Vγ1
ApaI
CoIE1 ori
Cγ1
XhoI
ClaI
HindIII, ClaI
HindIII
ClaI
1
Amp
pLgpCXIIHuCC49
V8ΔCH2
7609 bp
rep
Ecogpt
HCMV
Cγ1
Vγ1
ClaI
XhoI
ApaI
HindIII
ApaI, XhoI
1
Amp
pLgpCXIIHuCC49
V8ΔCH2
7609 bp
rep
Ecogpt
HCMV
Cγ1
Vγ1
ClaI
XhoI
ApaI
HindIII
1
Amp
pLgpCXIIHuWW5
ΔCH2
7609 bp
rep
Ecogpt
Cγ1
HCMV
Vγ1
ClaI
XhoI
AstII
ApaI
HindIII
HindIII, ClaI
1
Amp
pLgpCXIIHuWW5
ΔCH2
7609 bp
rep
Ecogpt
HCMV
ClaI
HindIII
1
Amp
pLgpCXIIHuWW5
ΔCH2
7609 bp
rep
Ecogpt
Cγ1
HCMV
Vγ1
ClaI
XhoI
AstII
ApaI
HindIII
ApaI, XhoI
ApaI
XhoI
P
1
Amp
pLgpCXIIHuWW5
v8ΔCH2
7609 bp
rep
Ecogpt
HCMV
Cγ1
Vγ1
ClaI
XhoI
AstII
ApaI
HindIII

Fig. 25

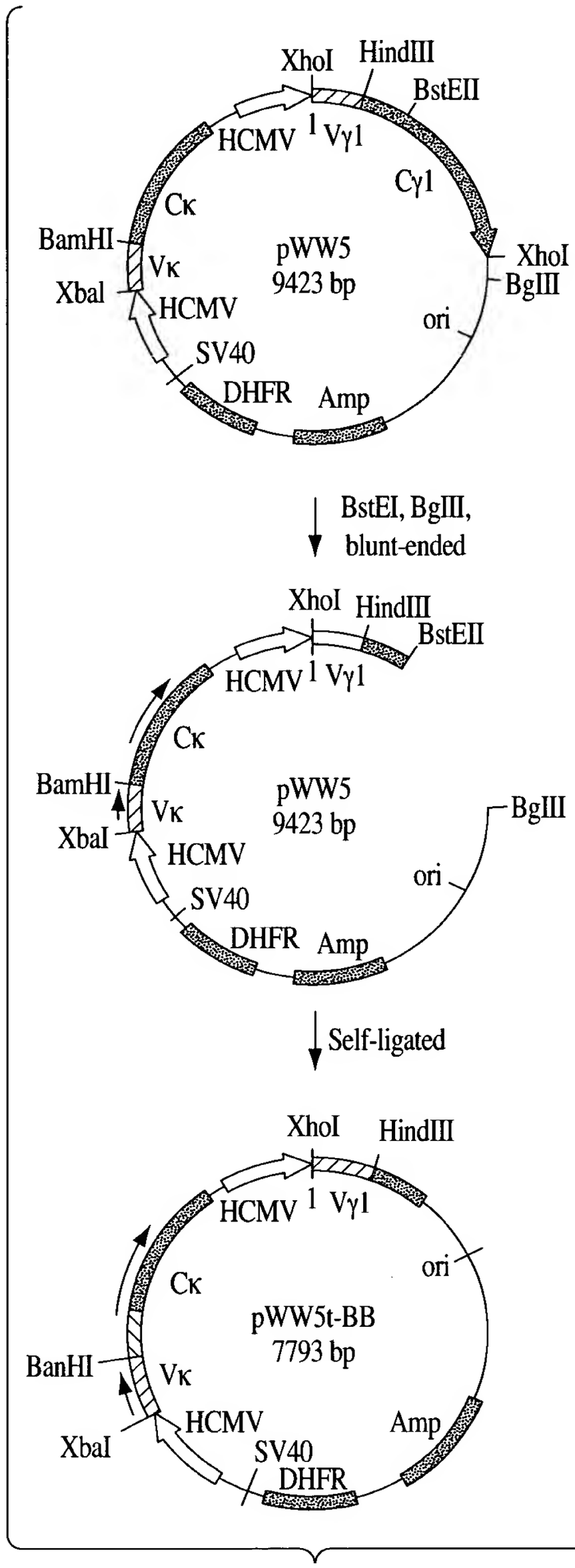
XhoI
HindIII
BstEII
HCMV
1
Vγ1
Cγ1
Cκ
BamHI
Vκ
pWW5
9423 bp
XhoI
BglII
XbaI
HCMV
ori
SV40
DHFR
Amp
BstEI, BglII,
blunt-ended
XhoI
HindIII
BstEII
HCMV
1
Vγ1
Cκ
BamHI
Vκ
pWW5
9423 bp
BglII
XbaI
HCMV
ori
SV40
DHFR
Amp
Self-ligated
XhoI
HindIII
HCMV
1
Vγ1
ori
Cκ
pWW5t-BB
7793 bp
BanHI
Vκ
HCMV
Amp
XbaI
SV40
DHFR

Fig. 26A

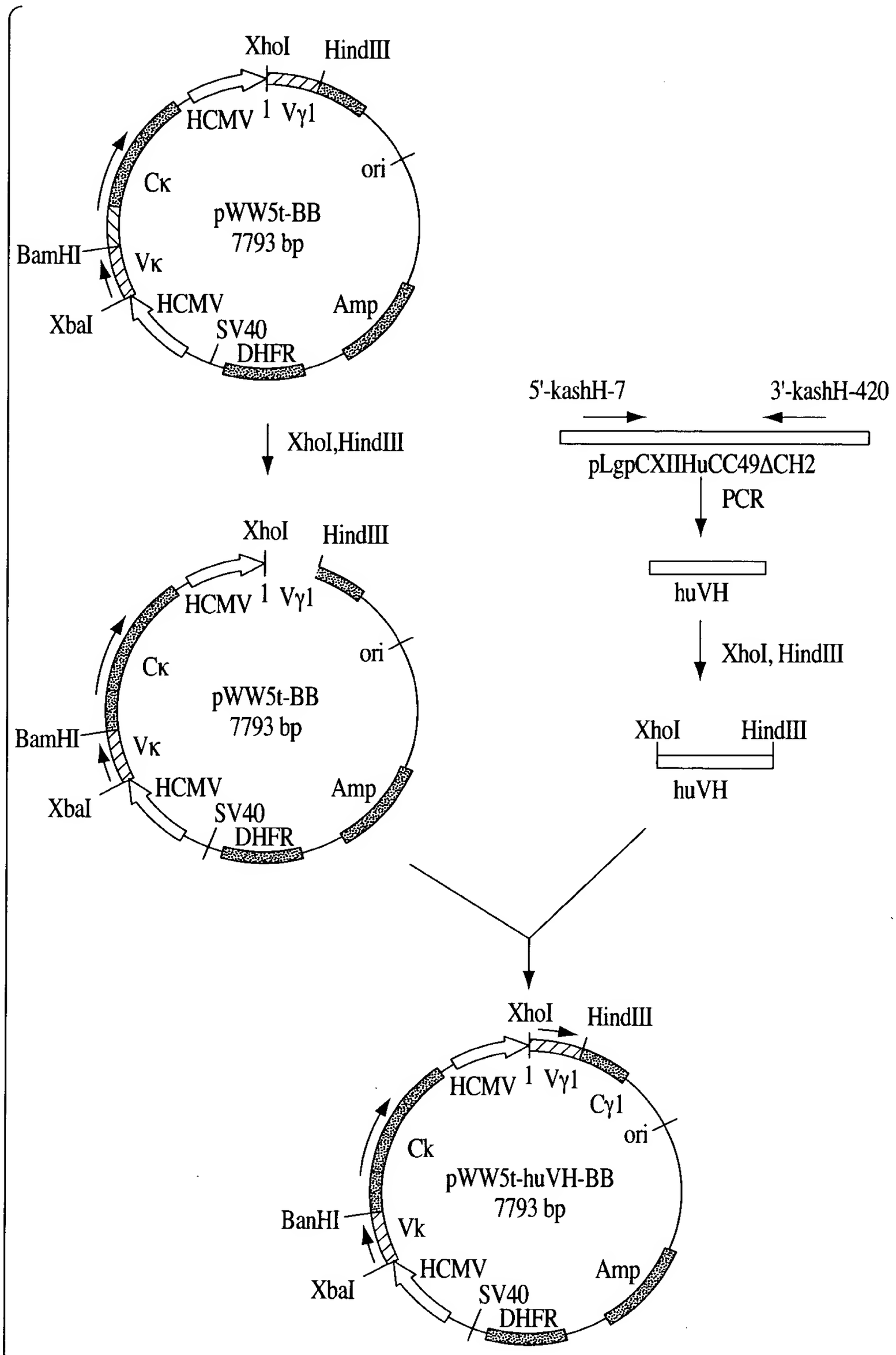
XhoI
HindIII
HCMV
1
Vγ1
ori
Cκ
pWW5t-BB
7793 bp
BamHI
Vκ
HCMV
Amp
XbaI
SV40
DHFR
XhoI,HindIII
5'-kashH-7
3'-kashH-420
pLgpCXIIHuCC49ΔCH2
PCR
huVH
XhoI, HindIII
XhoI
HindIII
huVH
Ck
BanHI
Vk
Cγ1
pWW5t-huVH-BB

Fig. 26B

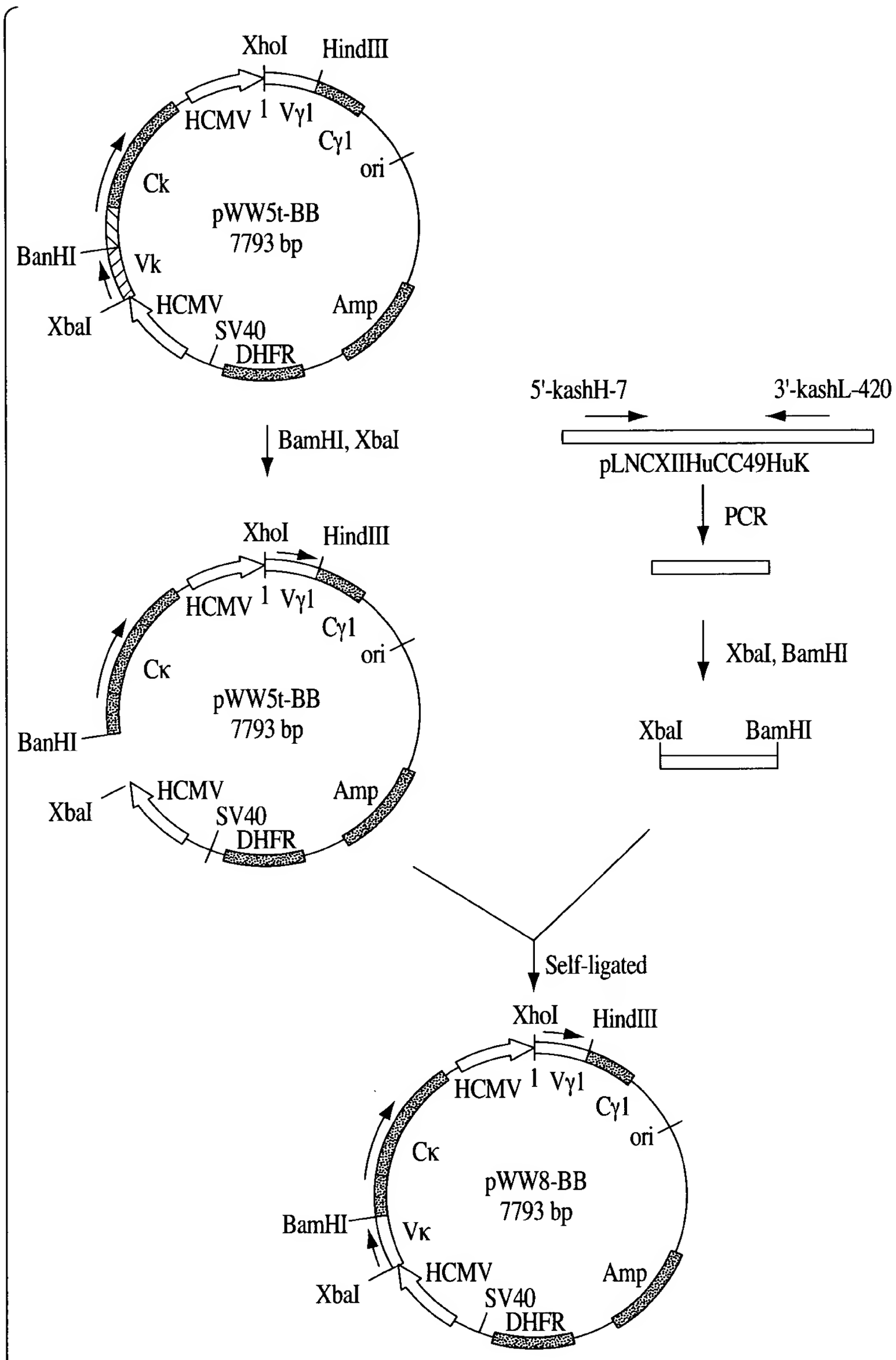
XhoI
HindIII
HCMV
1
Vγ1
Cγ1
ori
Ck
pWW5t-BB
7793 bp
BanHI
Vk
HCMV
Amp
XbaI
SV40
DHFR
BamHI, XbaI
5'-kashH-7
3'-kashL-420
pLNCXIIHuCC49HuK
PCR
XbaI, BamHI
XbaI
BamHI
Cκ
BanHI
Vκ
Self-ligated
pWW8-BB

Fig. 26C

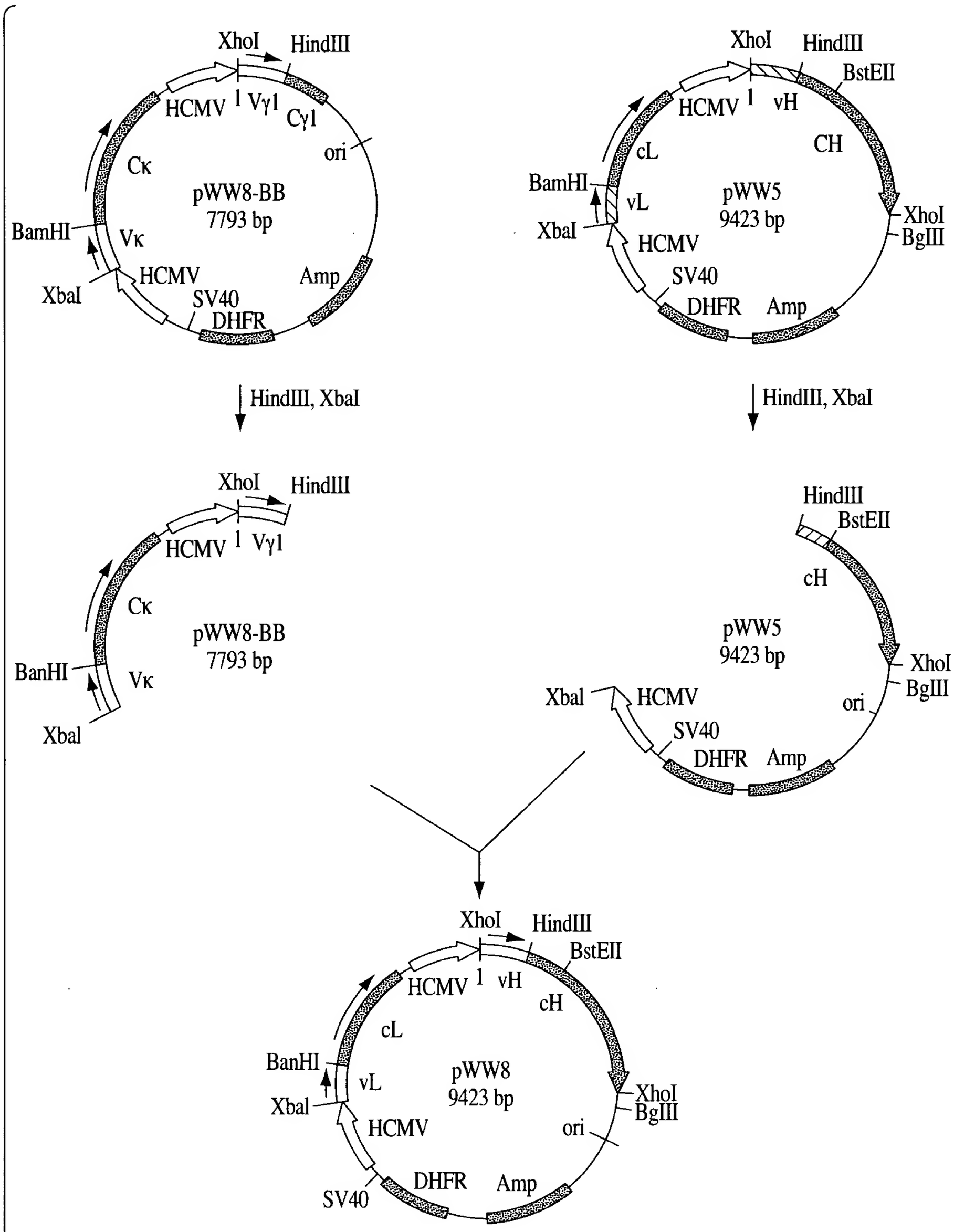
XhoI
HindIII
HCMV
1
Vγ1
Cγ1
ori
Cκ
pWW8-BB
7793 bp
BamHI
Vκ
HCMV
Amp
XbaI
SV40
DHFR
HindIII, XbaI
XhoI
HindIII
HCMV
1
Vγ1
Cκ
pWW8-BB
7793 bp
BanHI
Vκ
Xbal
XhoI
HindIII
BstEII
HCMV
1
vH
cL
CH
BamHI
vL
pWW5
9423 bp
XhoI
BgIII
XbaI
HCMV
SV40
DHFR
Amp
HindIII, XbaI
HindIII
BstEII
cH
pWW5
9423 bp
XhoI
BgIII
Xbal
HCMV
ori
SV40
DHFR
Amp
XhoI
HindIII
BstEII
HCMV
1
vH
cH
cL
BanHI
vL
pWW8
9423 bp
XhoI
BgIII
Xbal
HCMV
ori
DHFR
Amp
SV40

Fig. 26D

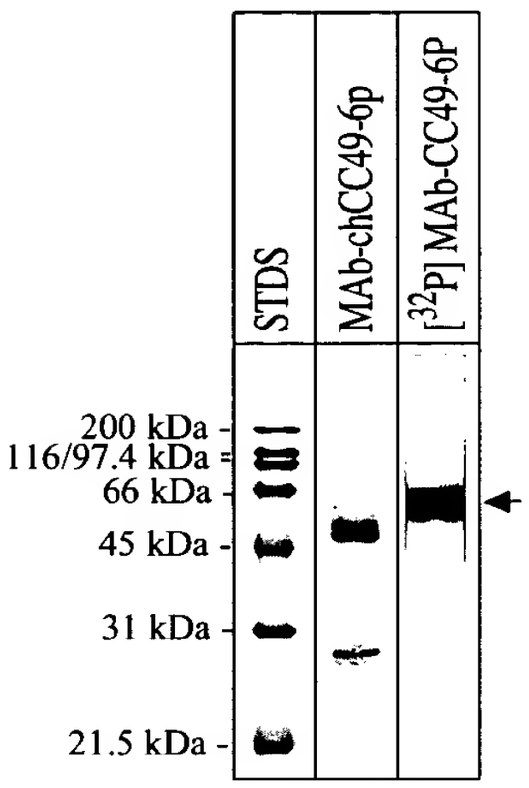

Fig. 27A

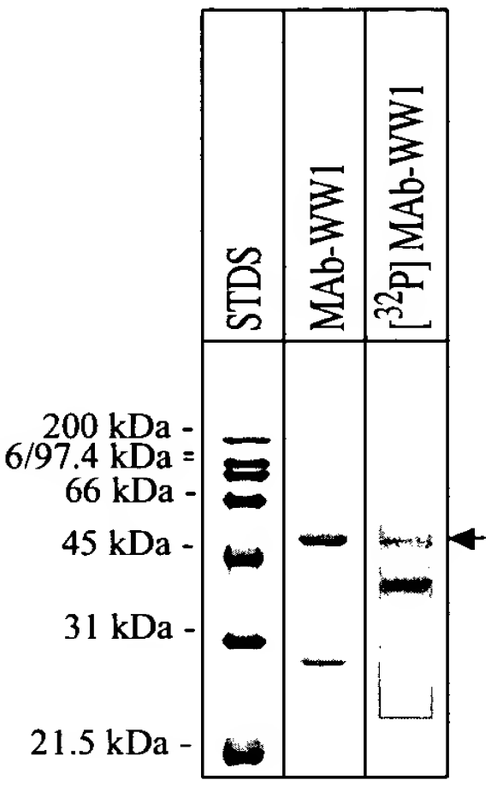

Fig. 27B

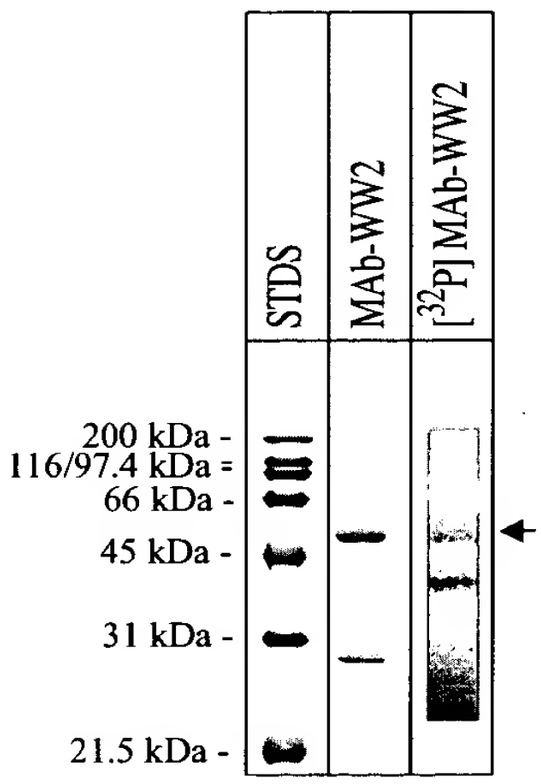

Fig. 27C

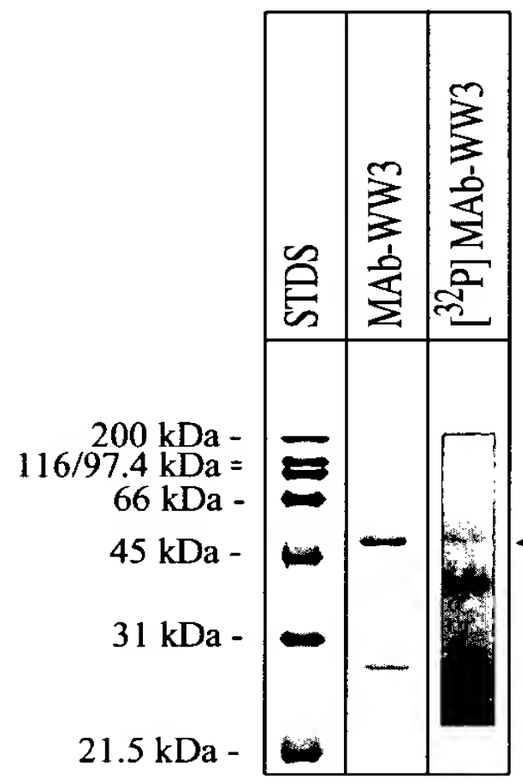

Fig. 27D

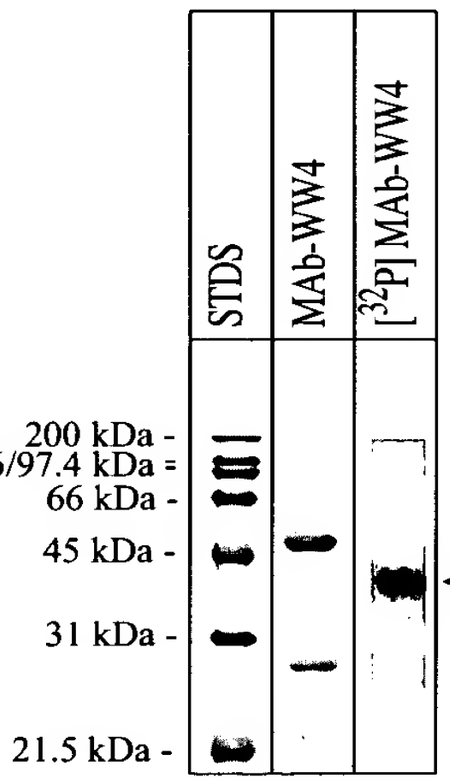

Fig. 27E

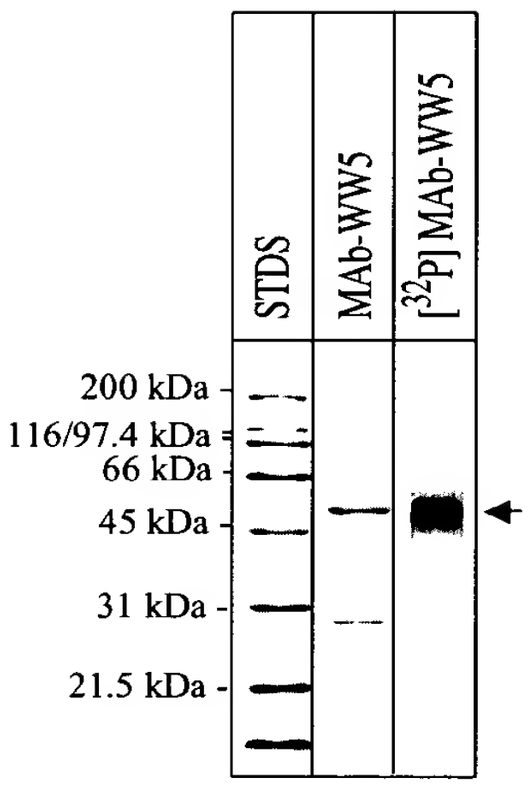

Fig. 27F

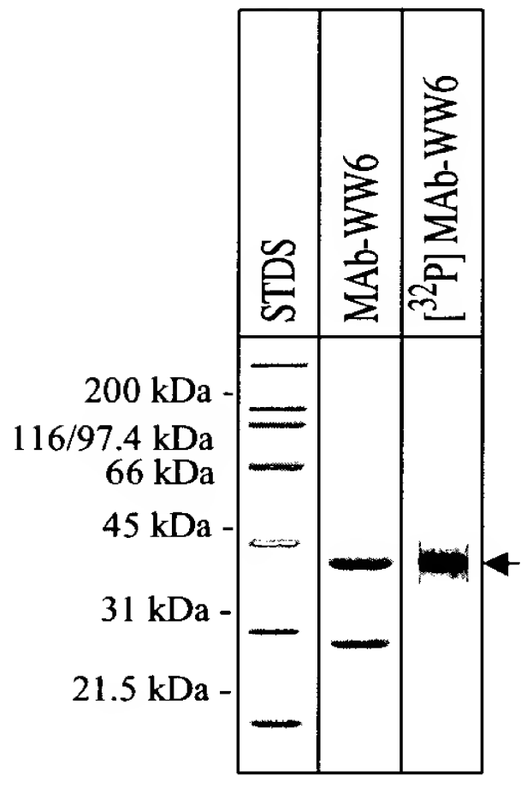

Fig. 27G

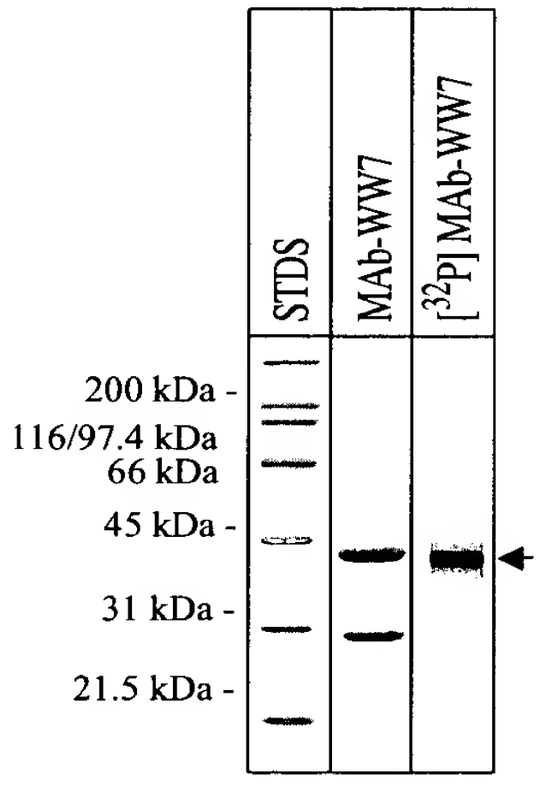

Fig. 27H

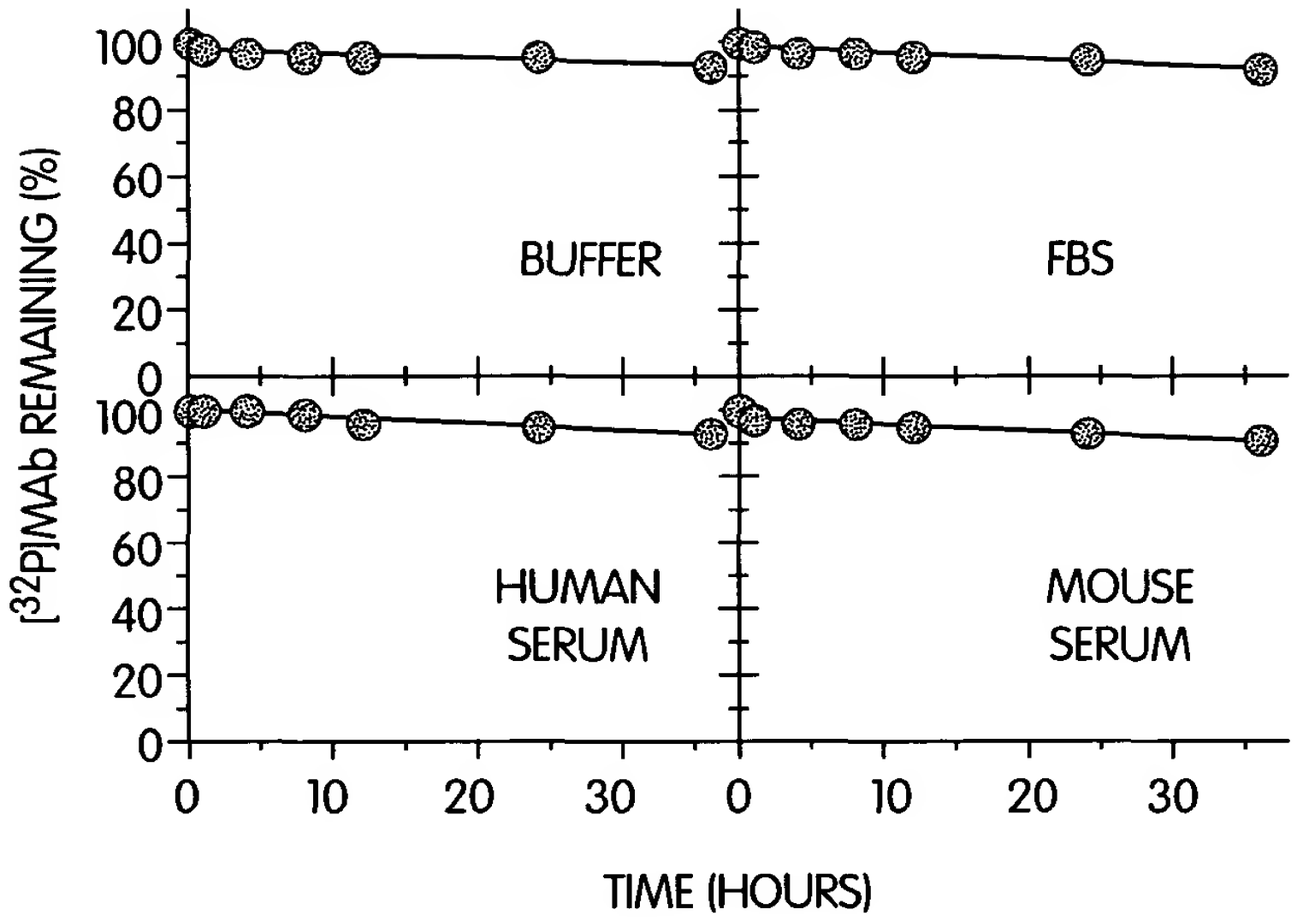
[32P]MAb REMAINING (%)
100
80
60
40
20
0
BUFFER
FBS
HUMAN SERUM
MOUSE SERUM
0
10
20
30
TIME (HOURS)

Fig. 28

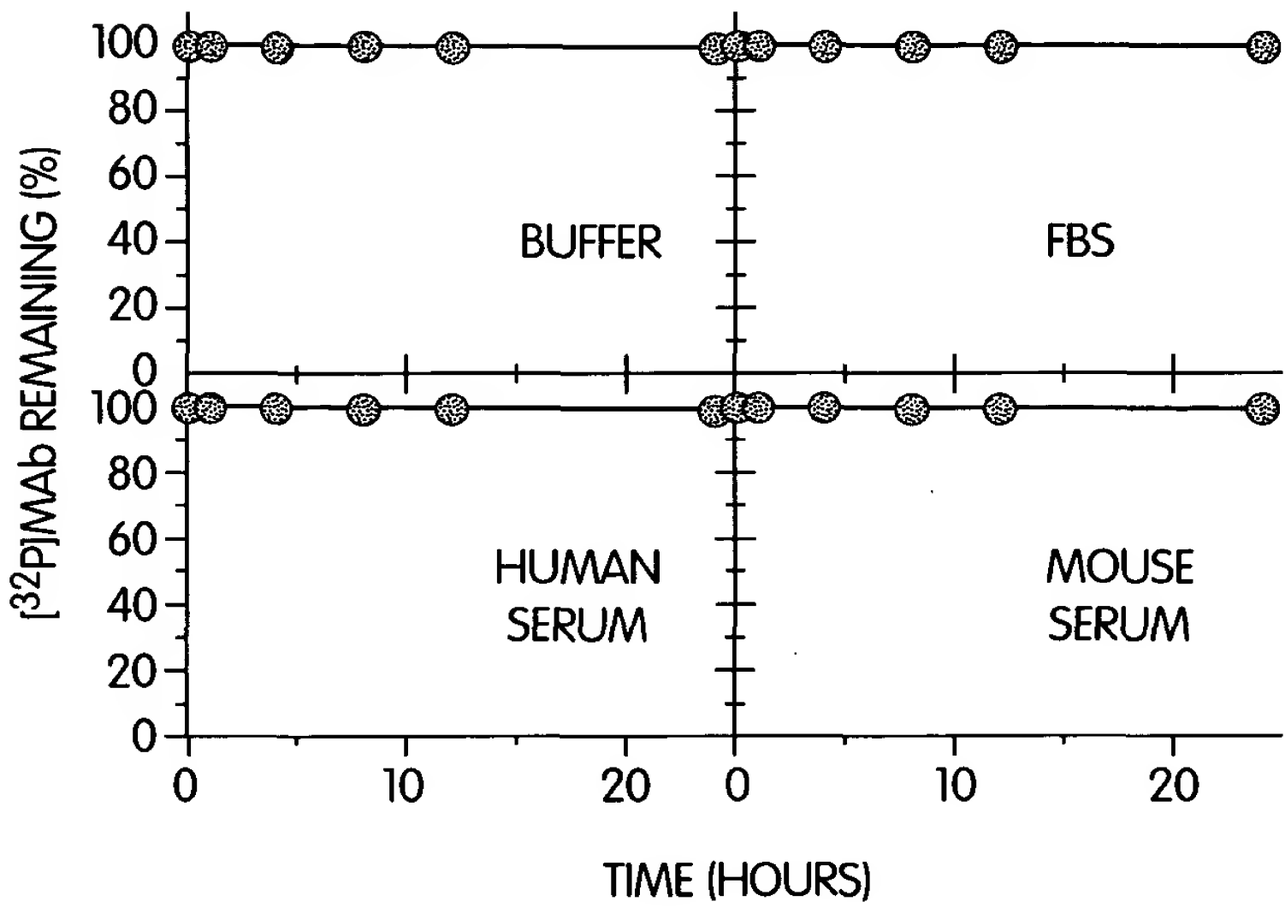
[32P]MAb REMAINING (%)
100
80
60
40
20
0
BUFFER
FBS
HUMAN SERUM
MOUSE SERUM
0
10
20
TIME (HOURS)

Fig. 29

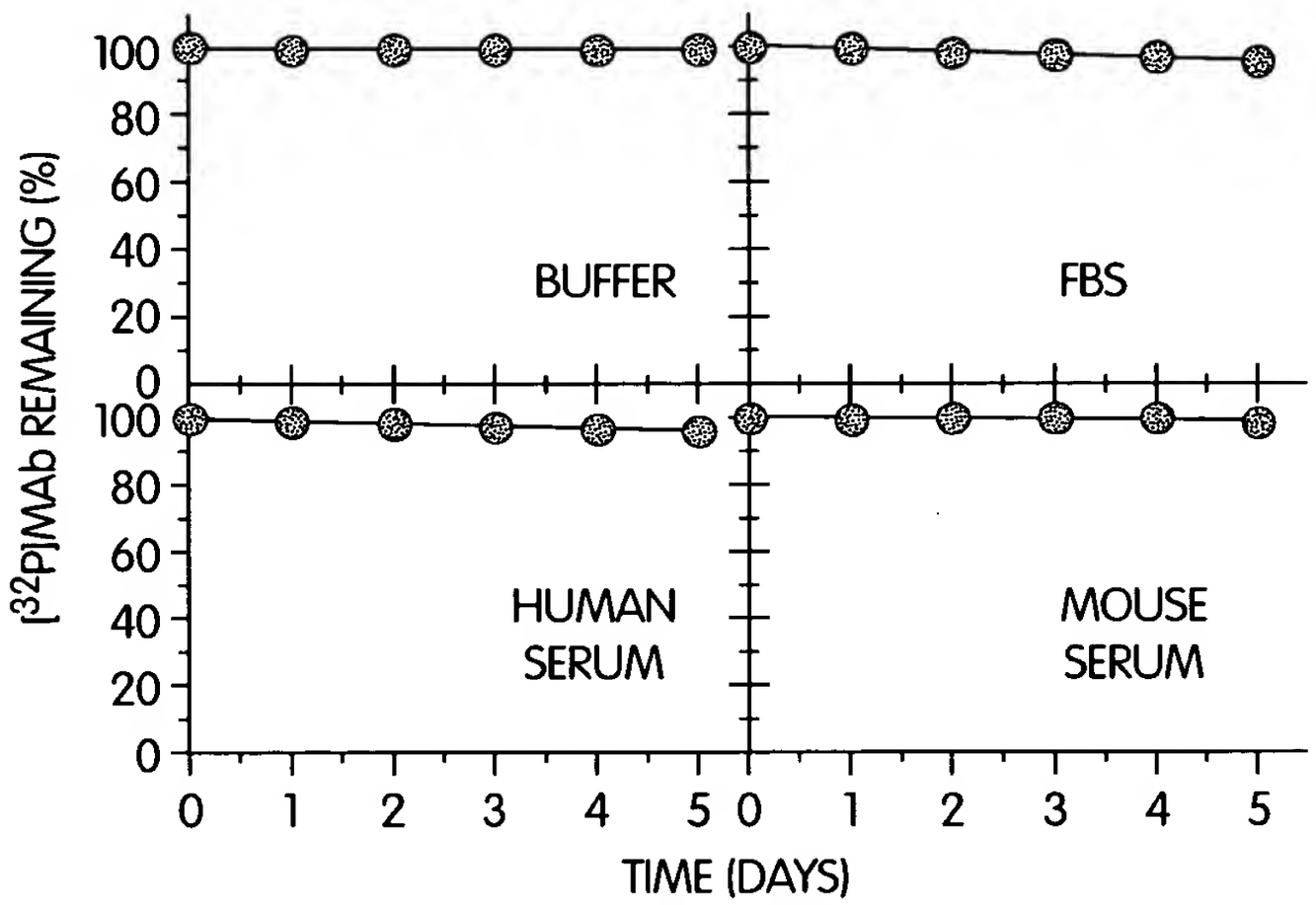
[32P]MAb REMAINING (%)
100
80
60
40
20
0
BUFFER
FBS
HUMAN SERUM
MOUSE SERUM
0 1 2 3 4 5
TIME (DAYS)

Fig. 30

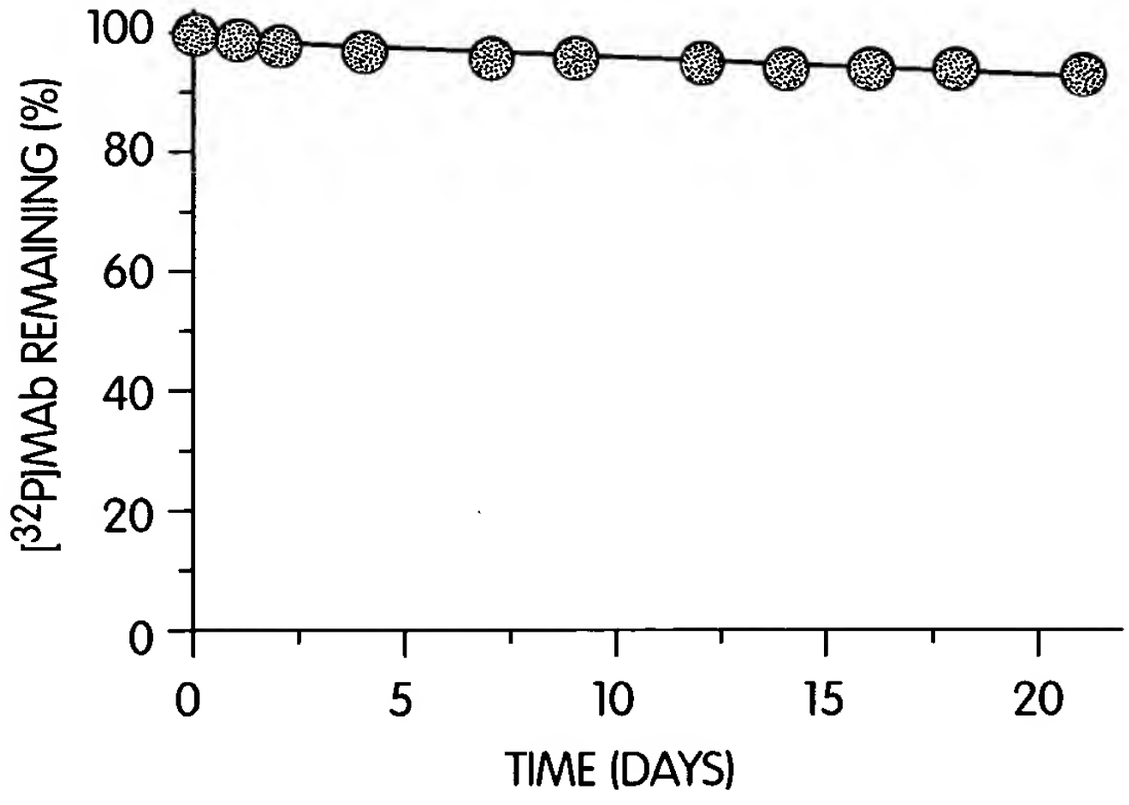
[32P]MAb REMAINING (%)
100
80
60
40
20
0
0 5 10 15 20
TIME (DAYS)

Fig. 31

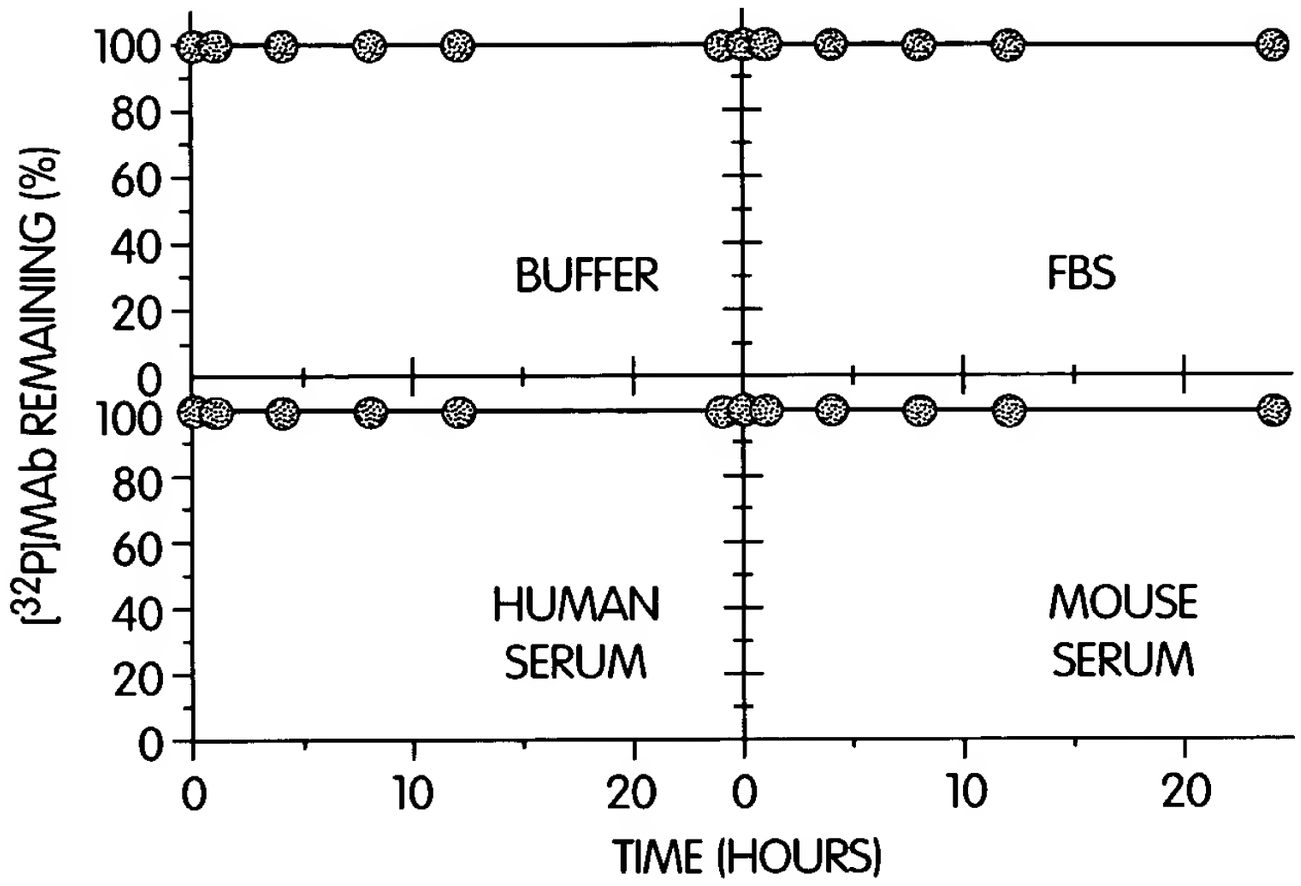
[32P]MAb REMAINING (%)
100
80
60
40
20
0
BUFFER
FBS
HUMAN SERUM
MOUSE SERUM
0
10
20
TIME (HOURS)

Fig. 32

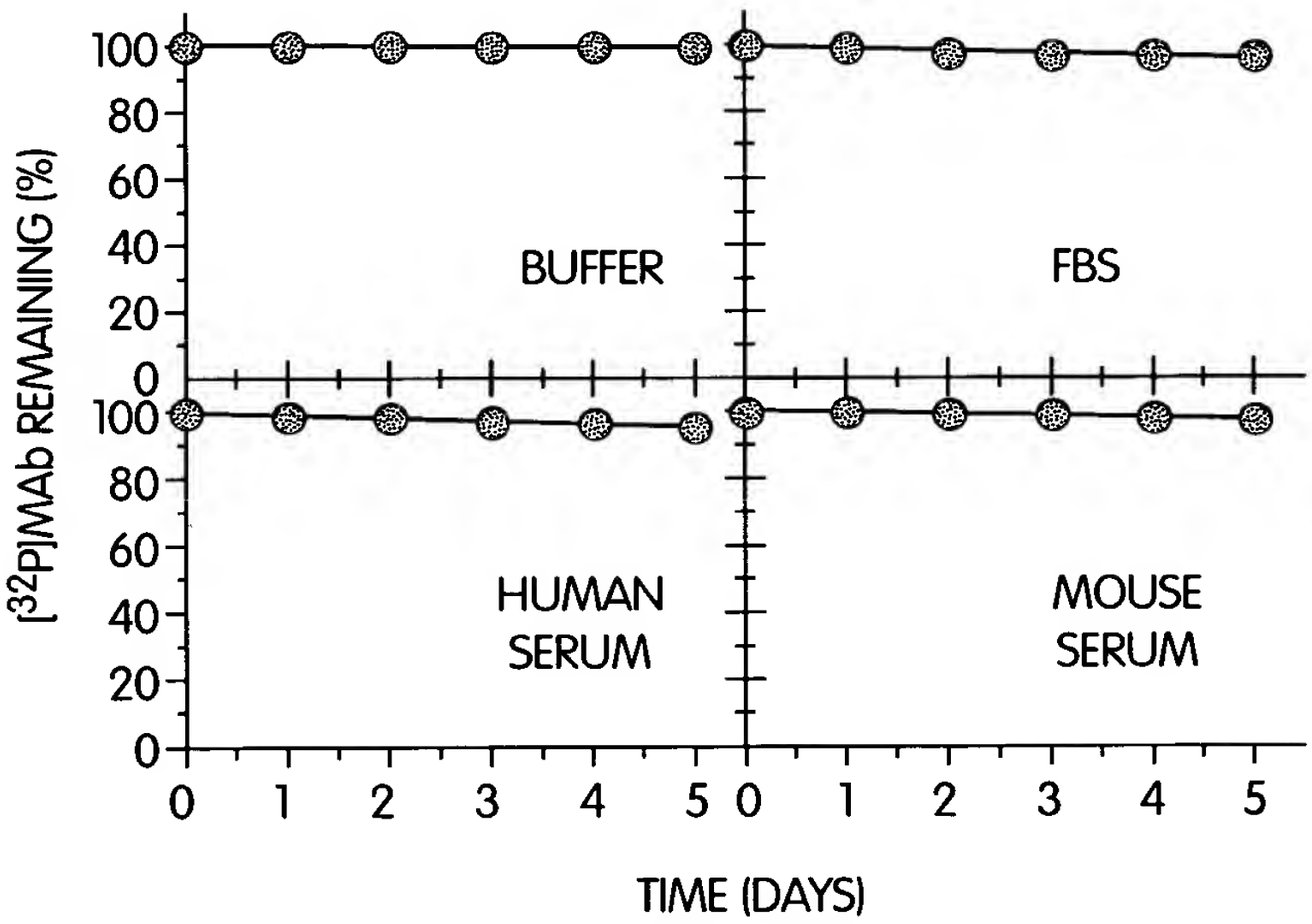
[32P]MAb REMAINING (%)
100
80
60
40
20
0
BUFFER
FBS
HUMAN SERUM
MOUSE SERUM
0
1
2
3
4
5
TIME (DAYS)

Fig. 33

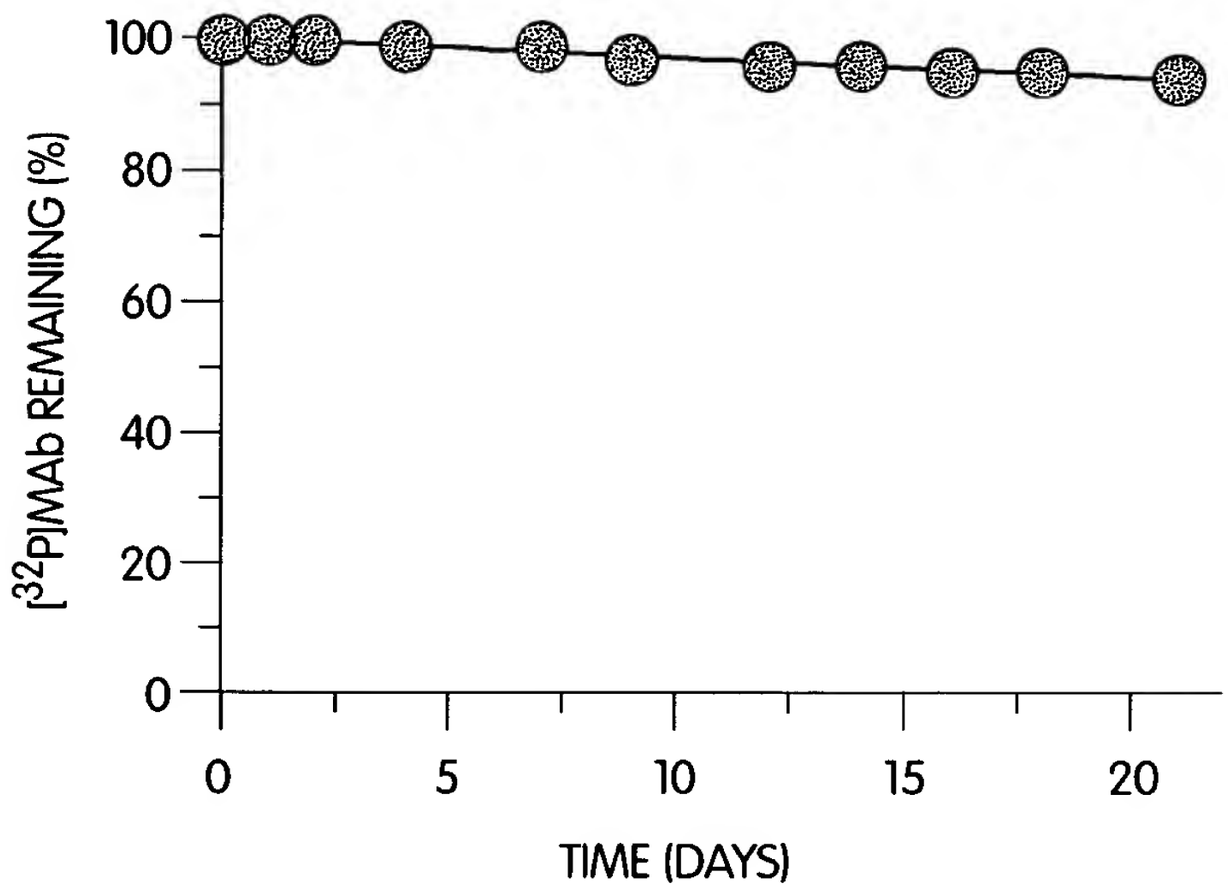
100
80
60
40
20
0
[32P]MAb REMAINING (%)
0
5
10
15
20
TIME (DAYS)

Fig. 34

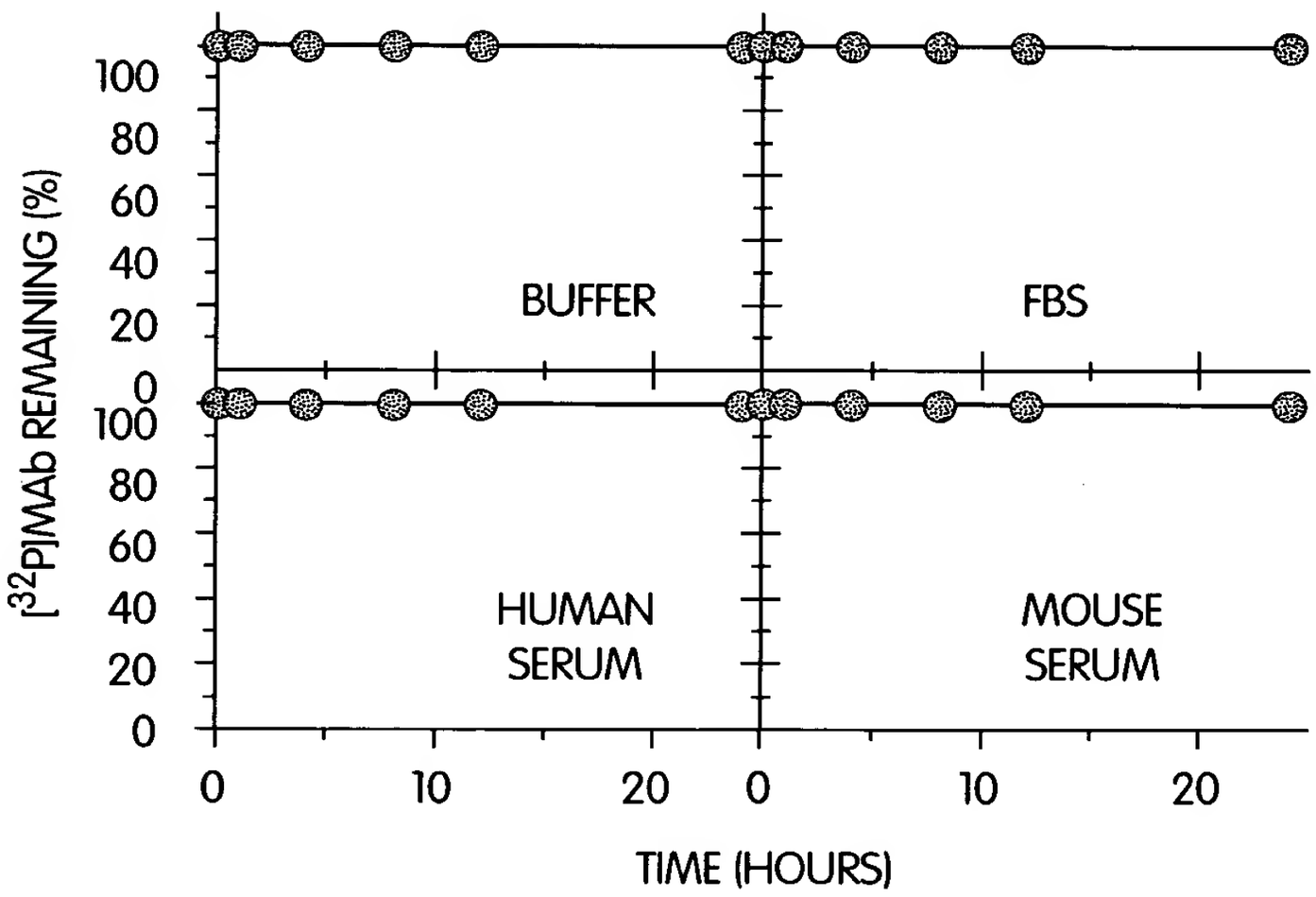
100
80
60
40
20
0
[32P]MAb REMAINING (%)
BUFFER
FBS
HUMAN SERUM
MOUSE SERUM
0
10
20
0
10
20
TIME (HOURS)

Fig. 35

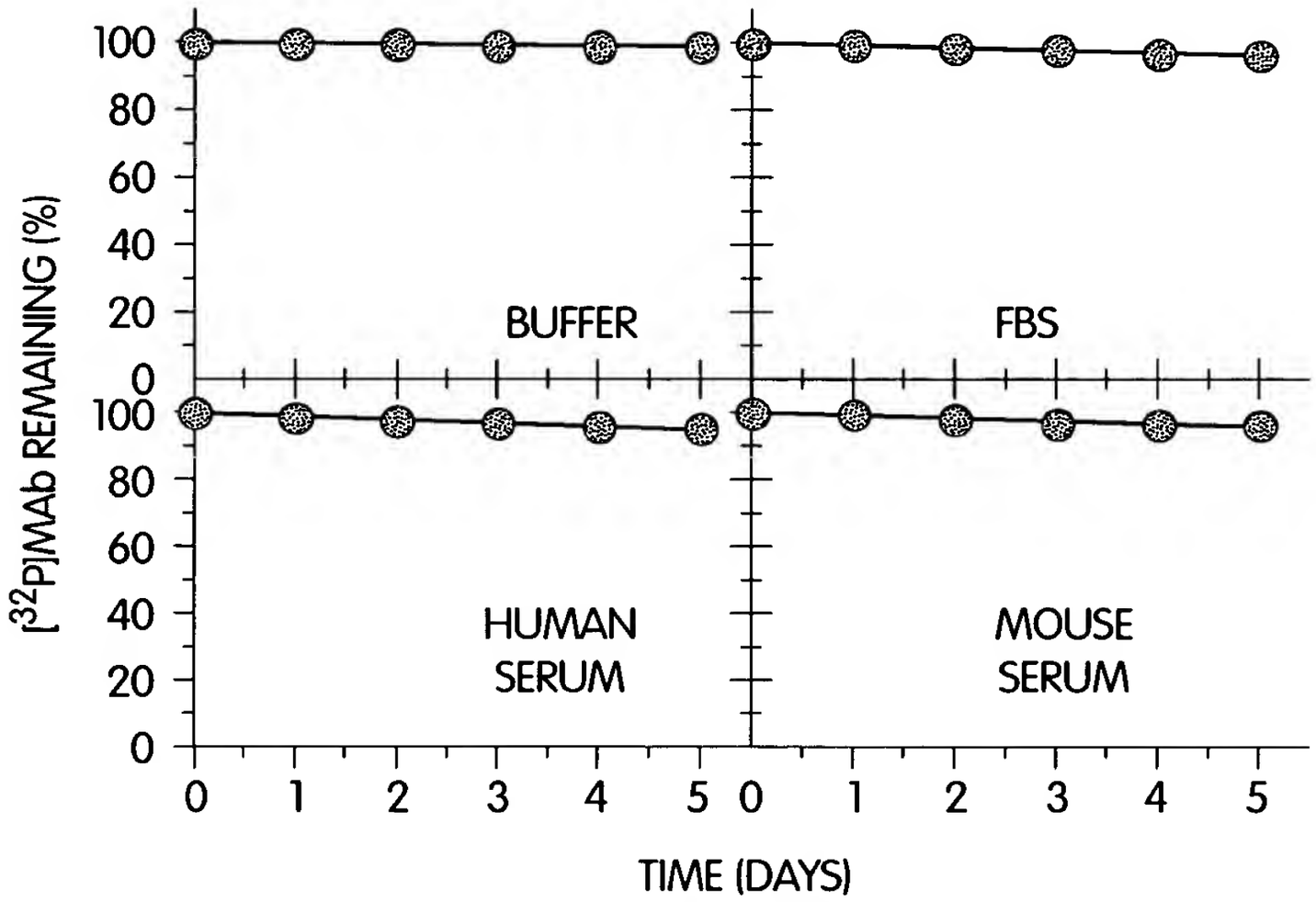
[32P]MAb REMAINING (%)
100
80
60
40
20
0
BUFFER
FBS
HUMAN SERUM
MOUSE SERUM
0 1 2 3 4 5
TIME (DAYS)

Fig. 36

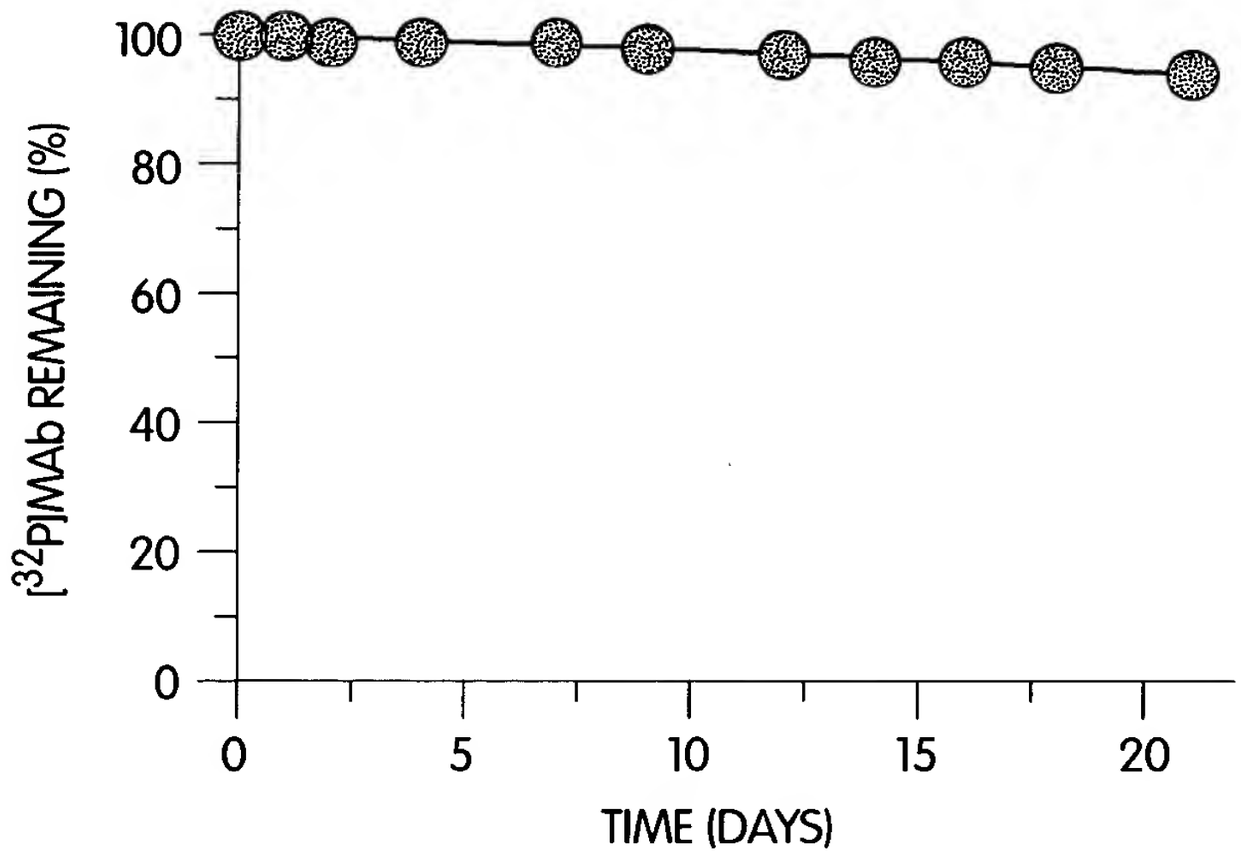
[32P]MAb REMAINING (%)
100
80
60
40
20
0
0 5 10 15 20
TIME (DAYS)

Fig. 37

	UPPER	CORE	LOWER
MAb-chCC49:	EPKSCDKTHT	CPPCP	APELLGGP
MAb231:	EPRGPTIKP	CPPCKCP	APNLLGGP
MAb61.1.3:	VPRDCG	CKPCICT	VPEV

Fig. 38A

MAb-chCC49 x MAb231

```
1 EPKSCDKTHTCPP..CPAPELLGGP 23
  |||         |||   ||||  |||||
1 EPRG.PTIKPCPPCKCPAPNLLGGP 24
```

Fig. 38B

MAb-chCC49 x MAb61.1.3

```
1 EPKSCDKTHTCPPCPAPELLGGP 23
      ¦ ¦¦¦  |  ||      ¦
1     VPRDCGCKPCICTVPEV   17
```

Fig. 38C

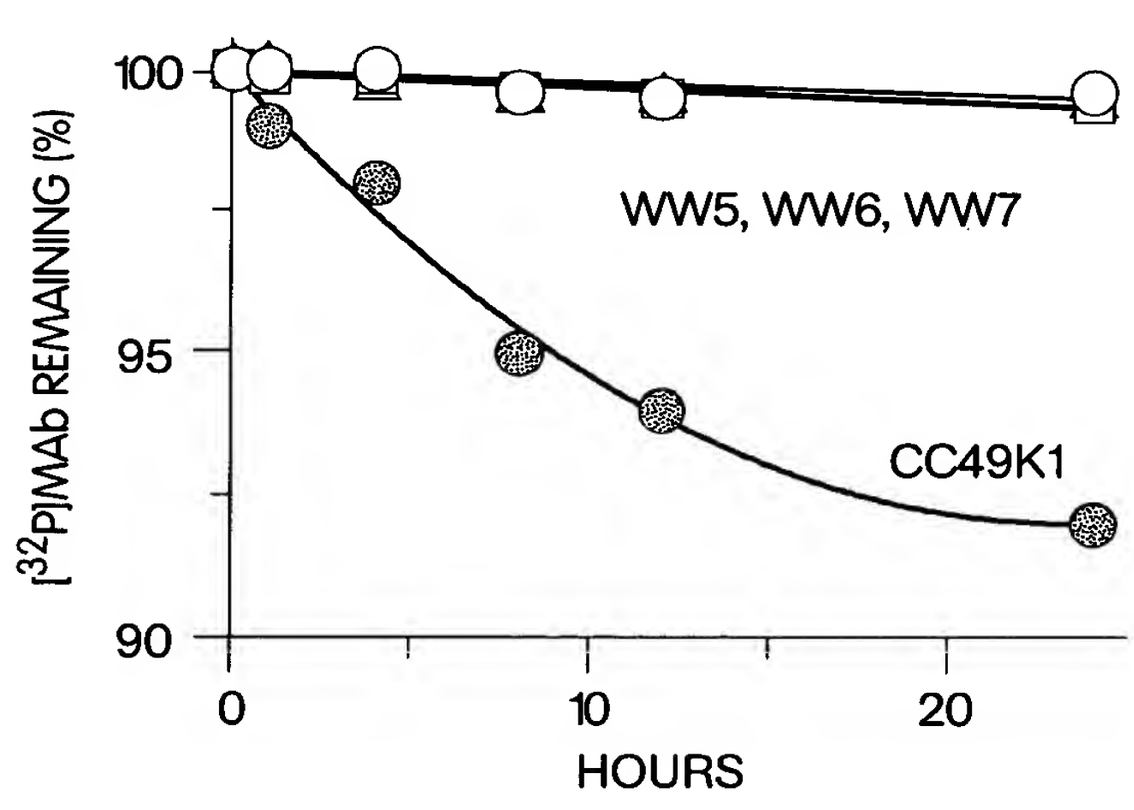

Fig. 39

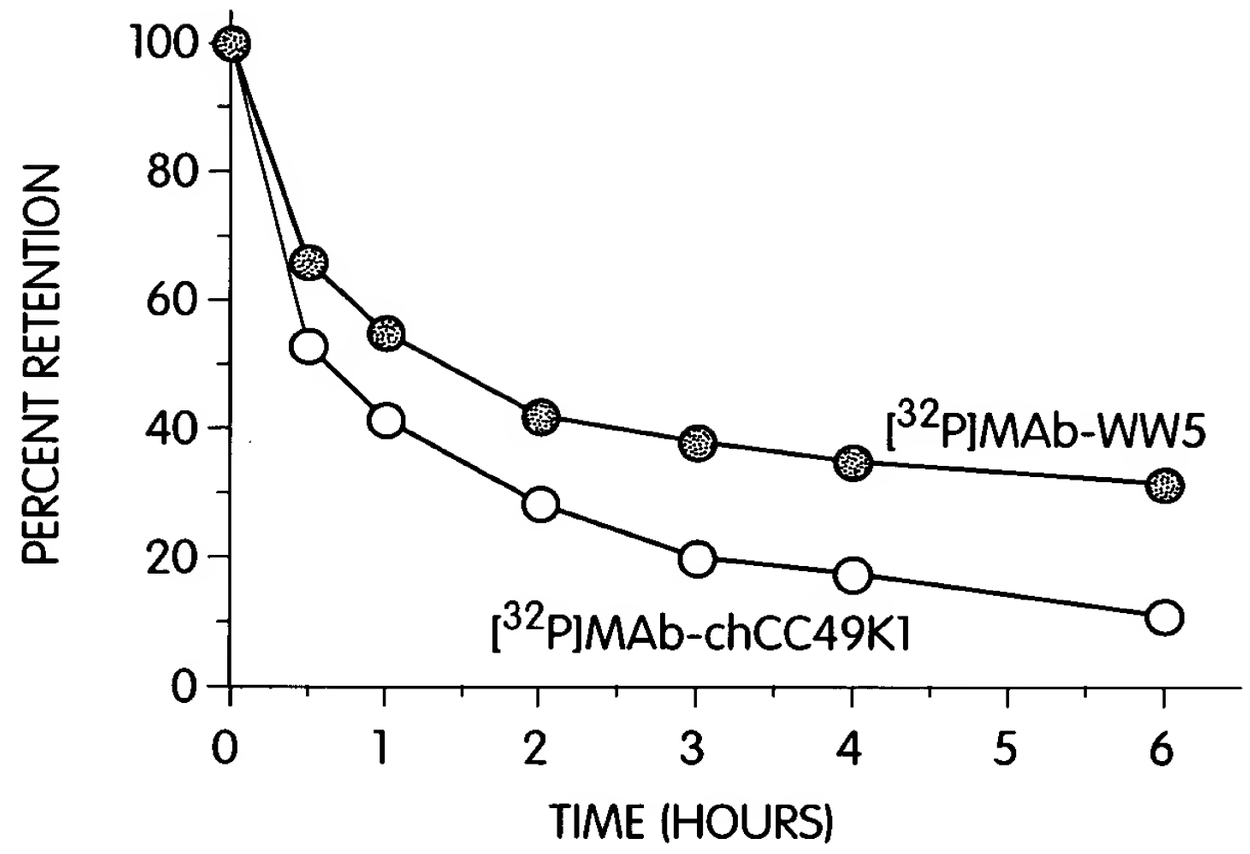
100
80
60
40
20
0
PERCENT RETENTION
0
1
2
3
4
5
6
TIME (HOURS)
[32P]MAb-WW5
[32P]MAb-chCC49K1

Fig. 40

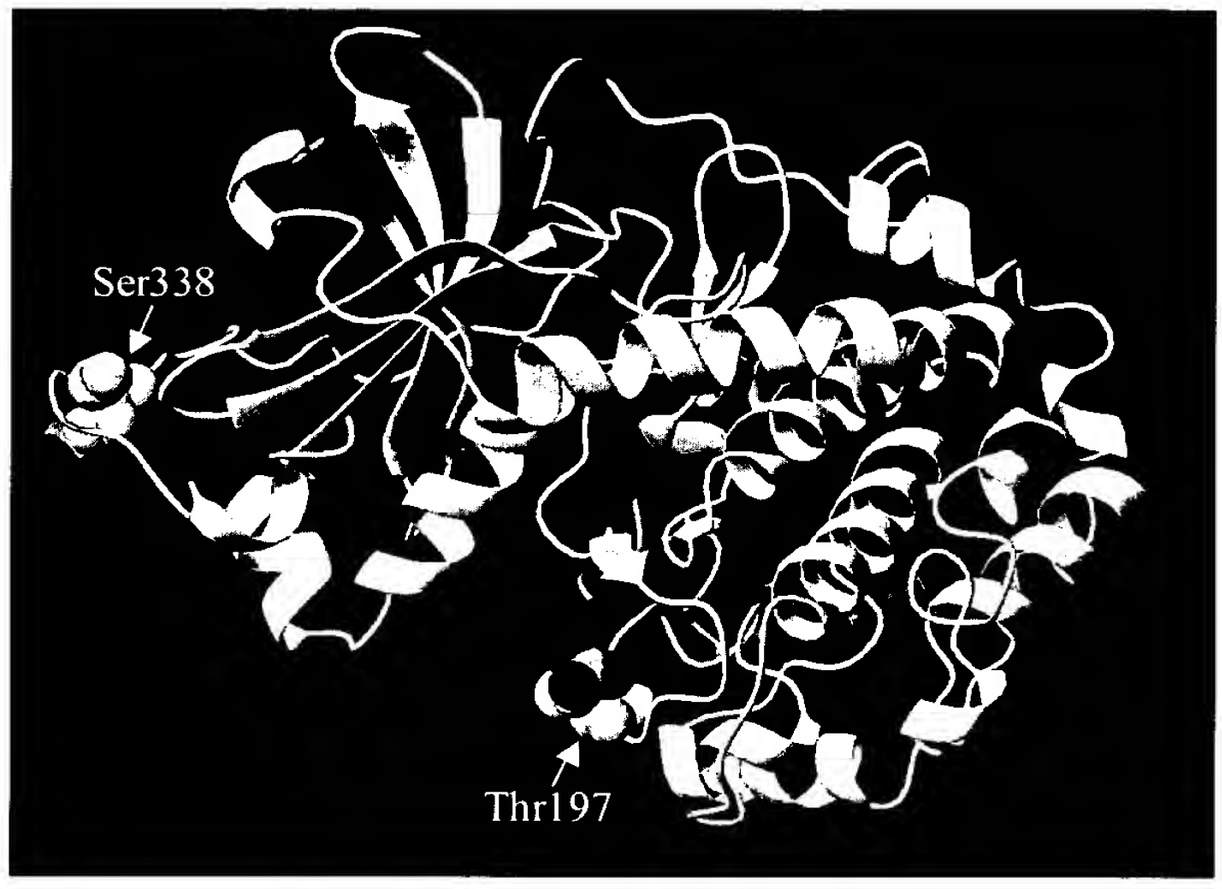
Ser338
Thr197

Fig. 41

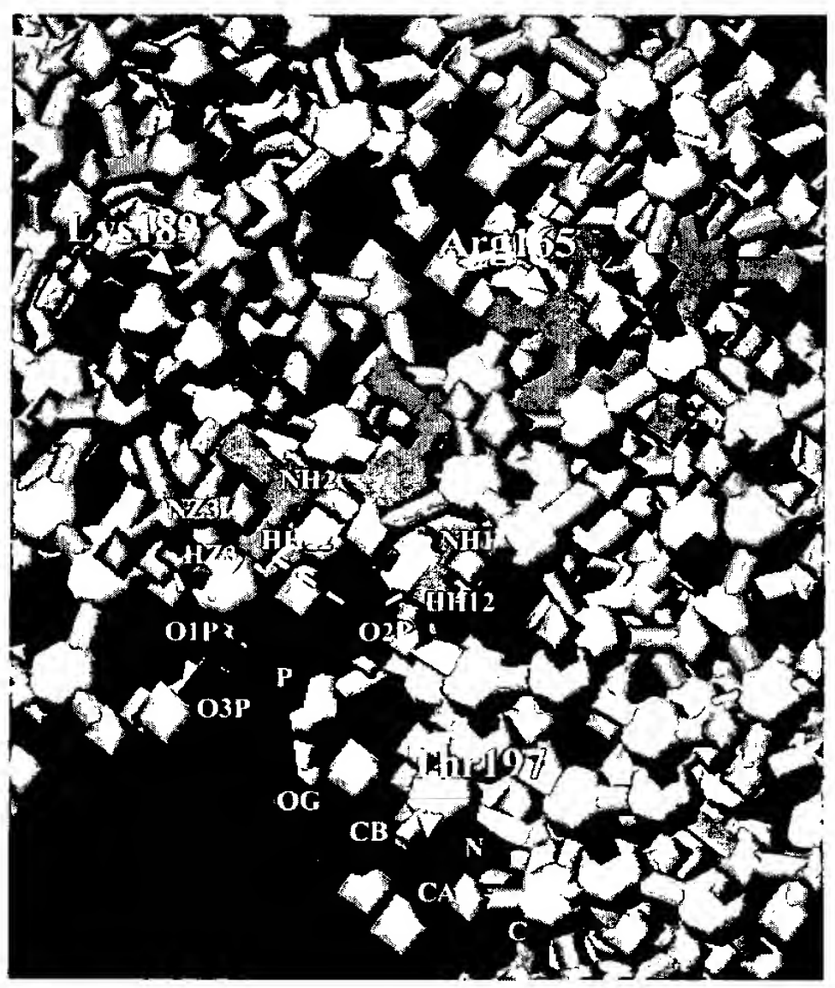
Lys189
Arg165
NH2
NZ3
HH12
O1P
O2P
P
O3P
Thr197
OG
CB
N
CA
C

Fig. 42

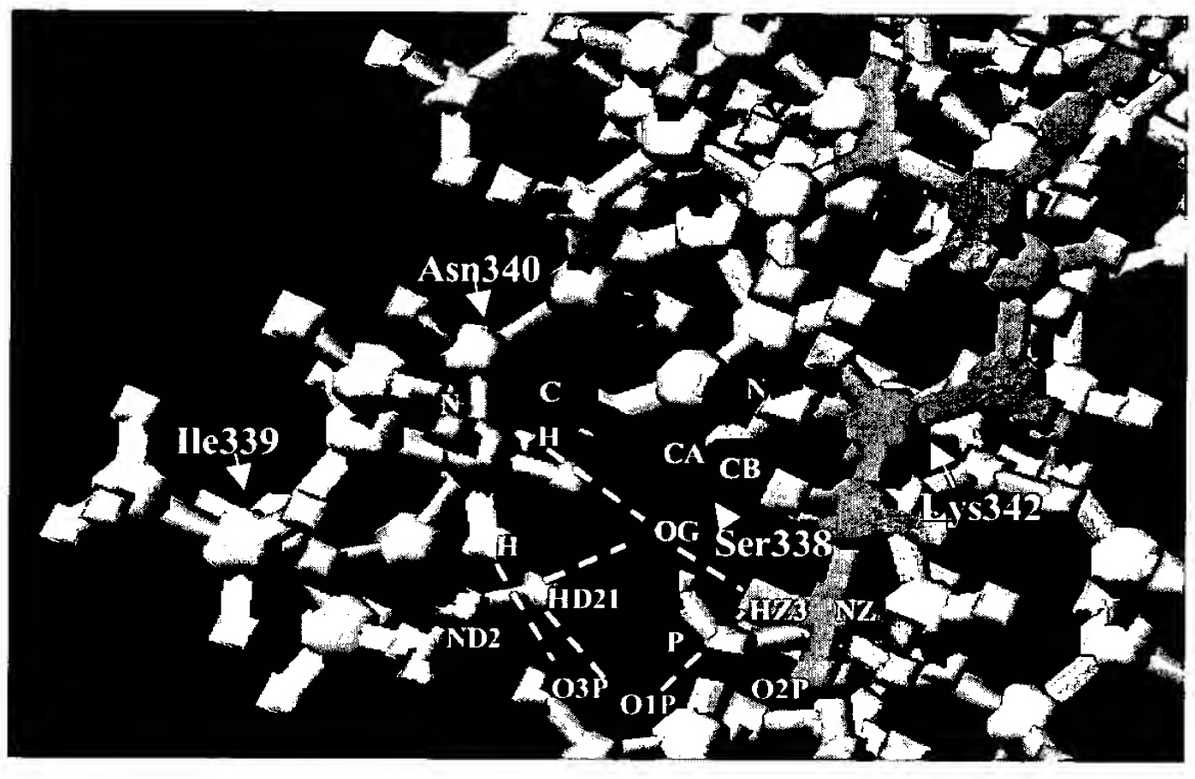
Asn340
Ile339
N
C
H
CA
CB
N
Lys342
OG
Ser338
H
HD21
ND2
P
HZ3
NZ
O3P
O1P
O2P

Fig. 43